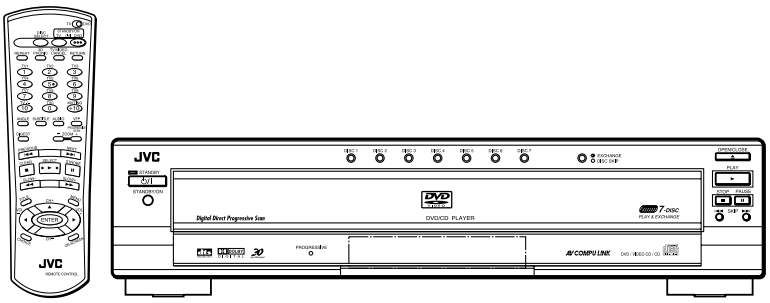
JVC

SERVICE MANUAL

DVD VIDEO PLAYER

XV-F80BK / XV-F85GD



Area Suffix (XV-F80BK)
J ---------- U.S.A.
C ---------- Canada

Area Suffix (XV-F85GD)
J ---------- U.S.A.

Each difference point

Model	Body color
XV-F80BK	Black
XV-F85GD	Gold

< ATTENTION ! >
Please pull out the AC plug code after the standby indicator lights pushing the power supply button without fail after completing the repair.
The mechanism becomes initialed position.
There is a possibility to break when carrying in not initialed position the mechanism but the state.

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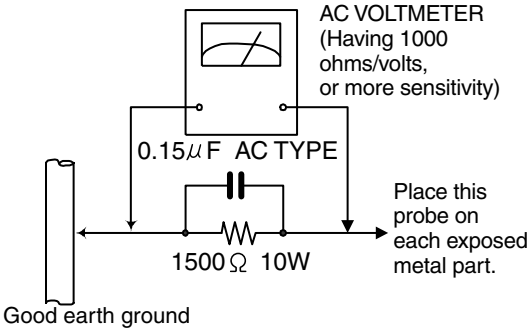
No.A0017
Sep. 2001

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ CAUTION

Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▮) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.
When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the J and C version)

Preventing static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

1.1. Grounding to prevent damage by static electricity

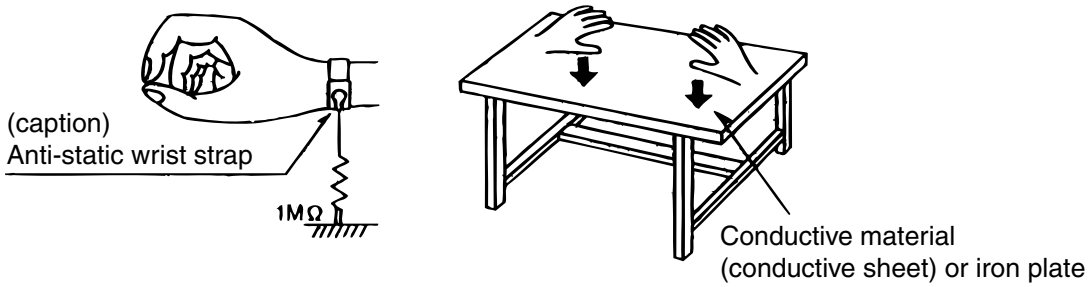
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as DVD players. Be careful to use proper grounding in the area where repairs are being performed.

1.1.1. Ground the workbench

1. Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

1.1.2. Ground yourself

1. Use an anti-static wrist strap to release any static electricity built up in your body.



1.1.3. Handling the optical pickup

1. In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)

2. Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

1.2. Handling the traverse unit (optical pickup)

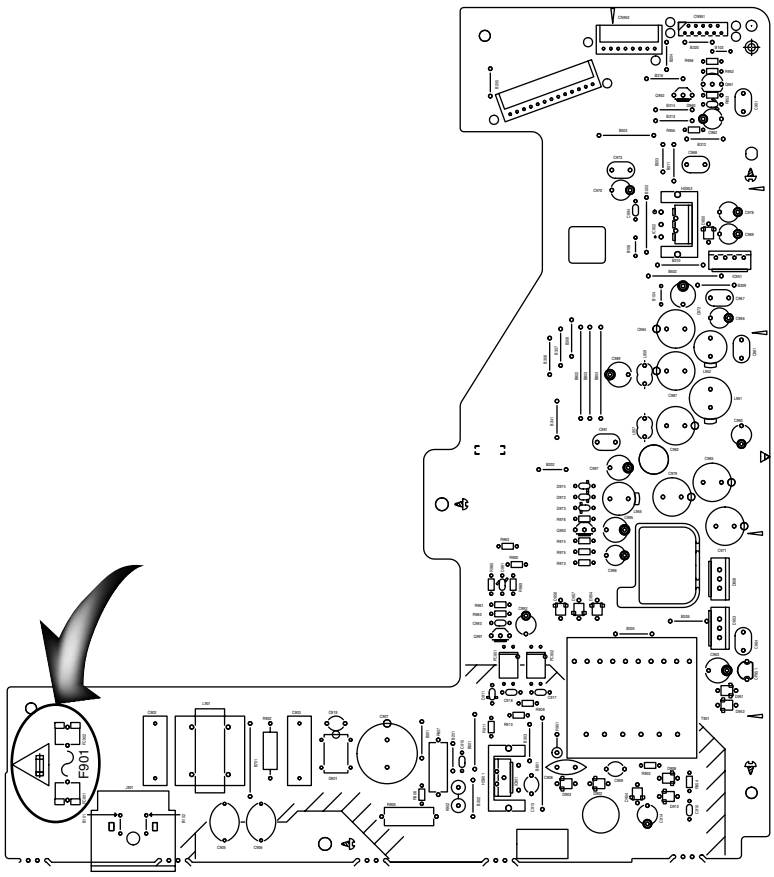
1. Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.

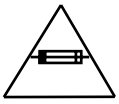
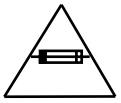
2. Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.

3. Handle the flexible cable carefully as it may break when subjected to strong force.

4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it

Importance Admistering point on the Safety



Full Fuse Replacement Marking	Marquage Pour Le Remplacement Complet De Fusible
Graphic symbol mark (This symbol means fast blow type fuse.)	Le symbole graphique (Ce symbole signifie fusible de type á fusion rapide.)
	
should be read as follows ;	doit être interprété comme suit ;
FUSE CAUTION	**PRECAUTIONS SUR LES FUSIBLES**
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSES ;	**POUR UNE PROTECTION CONTINUE CONTRE DES RISQUES D'INCENDIE, REMPLACER SEULEMENT PAR UN FUSIBLE DU MEME TYPE ;**
F901 : 1.6 A / 125 V	**F901 : 1.6 A / 125 V**

Precautions for Service

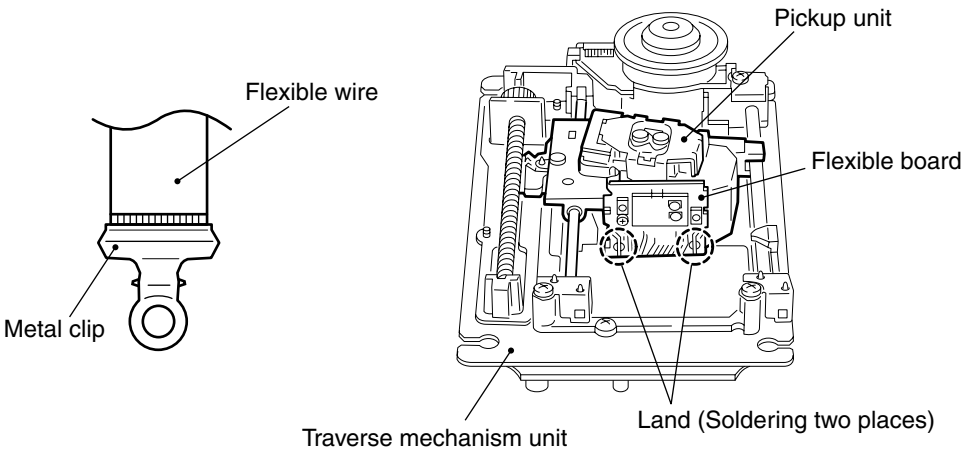
Handling of Traverse Unit and Laser Pickup

1. Do not touch any peripheral element of the pickup or the actuator.
2. The traverse unit and the pickup are precision devices and therefore must not be subjected to strong shock.
3. Do not use a tester to examine the laser diode. (The diode can easily be destroyed by the internal power supply of the tester.)
4. To replace the traverse unit, pull out the metal short pin for protection from charging.
5. When replacing the pickup, after mounting a new pickup, remove the solder on the short land which is provided at the center of the flexible wire to open the circuit.
6. Half-fixed resistors for laser power adjustment are adjusted in pairs at shipment to match the characteristics of the optical block.
   Do not change the setting of these half-fixed resistors for laser power adjustment.

Destruction of Traverse Unit and Laser Pickup by Static Electricity

Laser diodes are easily destroyed by static electricity charged on clothing or the human body. Before repairing peripheral elements of the traverse unit or pickup, be sure to take the following electrostatic protection:

1. Wear an antistatic wrist wrap.
2. With a conductive sheet or a steel plate on the workbench on which the traverse unit or the pick up is to be repaired, ground the sheet or the plate.
3. After removing the flexible wire from the connector (CN101), short-circuit the flexible wire by the metal clip.
4. Short-circuit the laser diode by soldering the land which is provided at the two places of the flexible board for the pickup.
   After completing the repair, remove at the two places of the solder to open the circuit.



Disassembly method

<Main body>

■ Removing the top cover (See Fig.1)

1. Remove the two screws **A** on each side of the body.
2. Remove the two screws **B** on the back of the body.
3. Lift the rear part of the top cover and remove in the direction of the arrow while pulling both sides of the top cover outward.

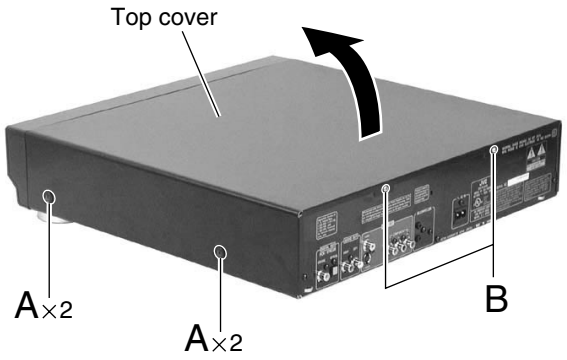


Fig.1

■ Removing the front panel assembly (See Fig.2 and 3)

- Prior to performing the following procedure, remove the top cover.

1. Disconnect the card wire from connector CN801 and CN803 on the servo control board, and CN951 on the power board respectively.
2. Remove the three screws **C** on the upper side of the body.
3. Remove the three screws **D** on the bottom of the body.

   Remove the front panel assembly toward the front.

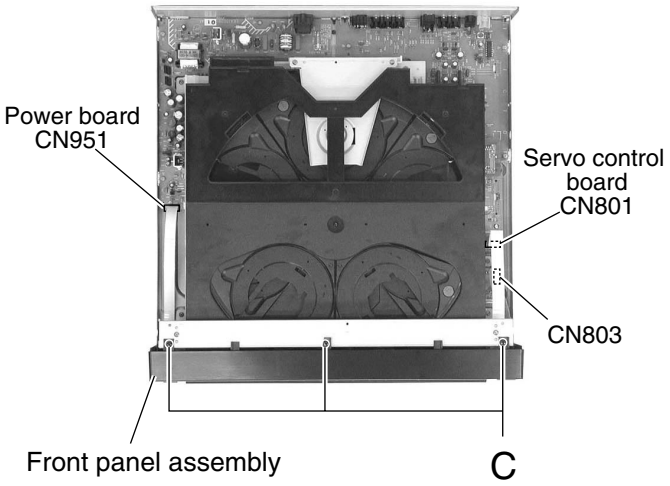


Fig.2

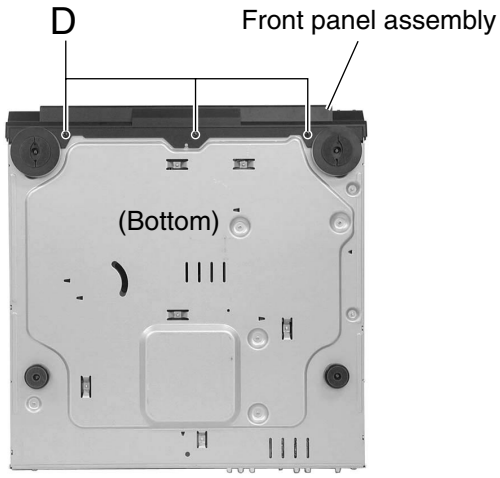


Fig.3

■ Removing the main tray assembly (See Fig.4 to 6)

- Prior to performing the following procedure, remove the top cover and the front panel assembly.

1. Turn over the body and insert a screwdriver into the slot of the bottom chassis, then move it in the direction of the arrow in Fig.4. The main tray assembly will move forward.

2. Draw the main tray assembly toward the front manually.

3. Bring up the joint **a** over the boss of the loading base assembly, and remove the main tray assembly toward the front.

4. Disconnect the card wire, on the back of the main tray assembly, from connector CN841 on the relay board 1.

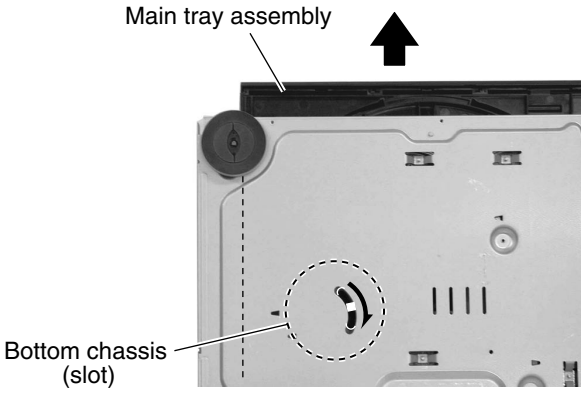


Fig.4

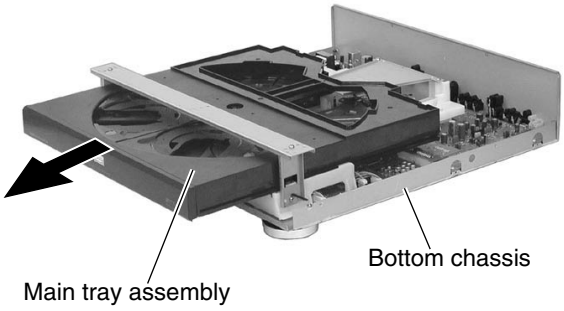


Fig.5

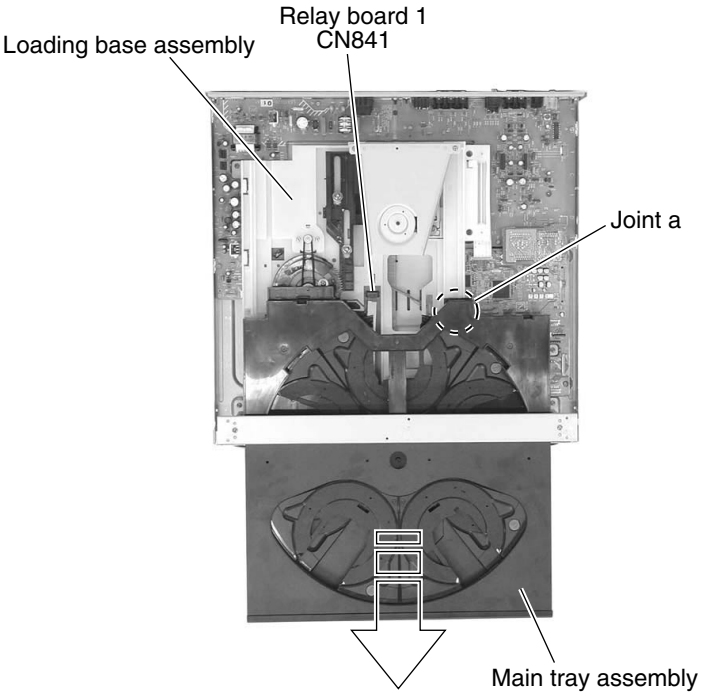


Fig.6

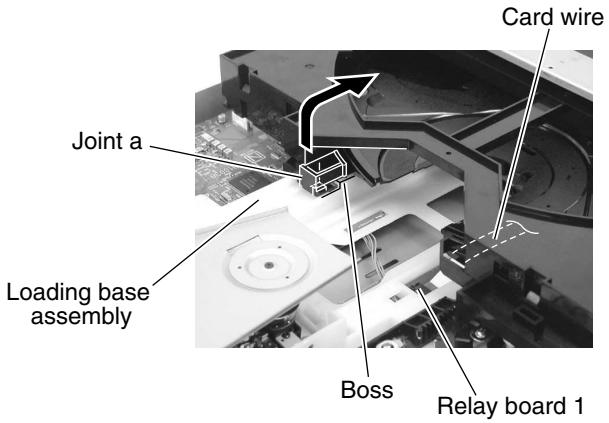


Fig.7

– Reattaching the main tray assembly – (See Fig.8 to 10)

1. Turn over the main tray assembly and pass the card wire extending from the photo sensor board through the notch **b**, in advance (Fig.8).

2. From above the loading base assembly, turn the load base counterclockwise until the slide gear stops at the back end (Bring down the traverse mechanism assembly).

3. Reattach the main tray assembly to the loading base assembly while fitting to the groove on the right and left sides of the loading base assembly.

4. Connect the card wire through the notch **b** to connector CN841 on the relay board 1.

5. Reattach the main tray assembly while fitting the slot **c** to the shaft.

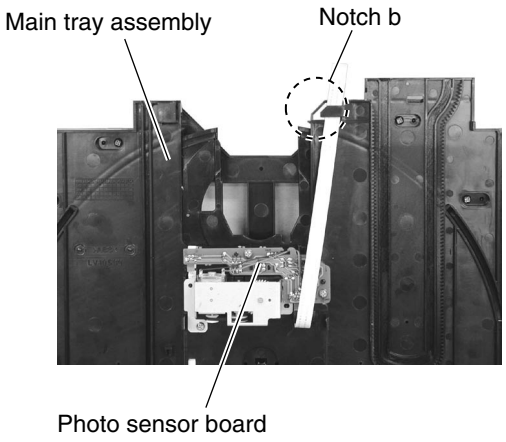


Fig.8

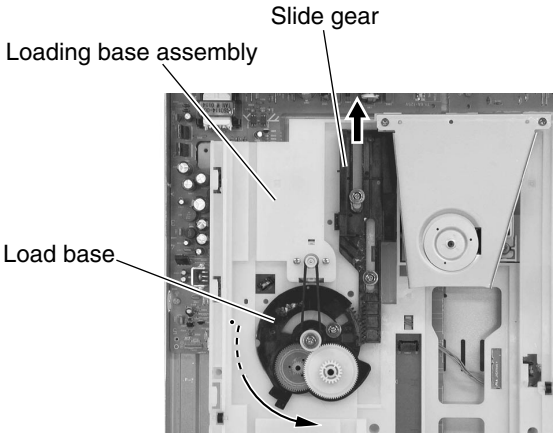


Fig.9

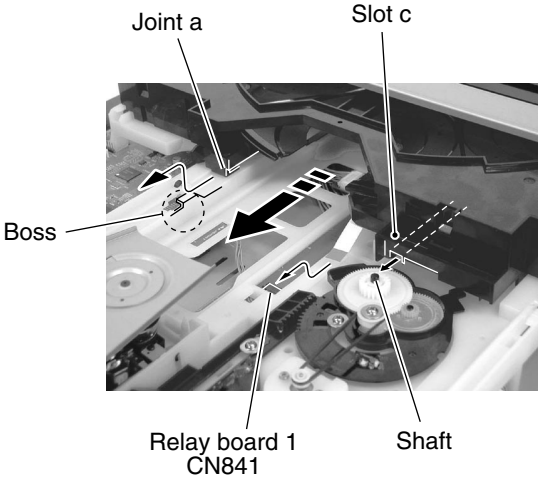


Fig.10

■Removing the loading base assembly (See Fig.11)

・ Prior to performing the following procedure, remove the top cover, the front panel assembly and the main tray assembly.

1. Disconnect the wire from connector CN808, CN809 and the card wire from CN210 on the servo control board respectively.

2. Remove the seven screws **E** attaching the loading base assembly.

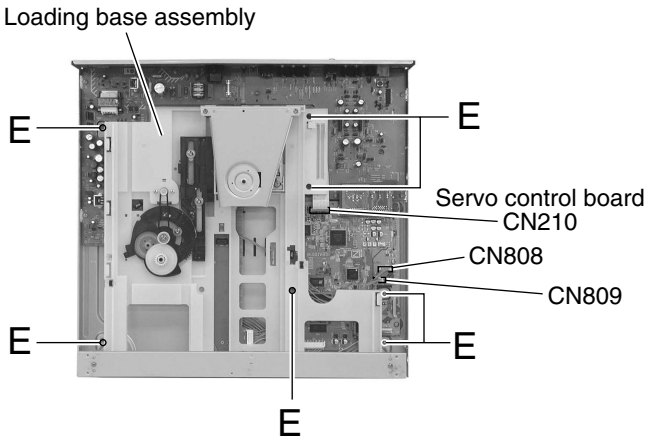


Fig.11

■Removing each board (See Fig.12 to 14)

・ Prior to performing the following procedure, remove the top cover, the front panel assembly, the main tray assembly and the loading base assembly.

–Servo control board–

1. Pull out the relay board 2 on the upper side of the body.

2. Disconnect the wire from connector CN807, CN810 and CN910 on the servo control board respectively.

3. Remove the screw **G** attaching the lug wire.

4. Remove the three screws **F** attaching the servo control board.

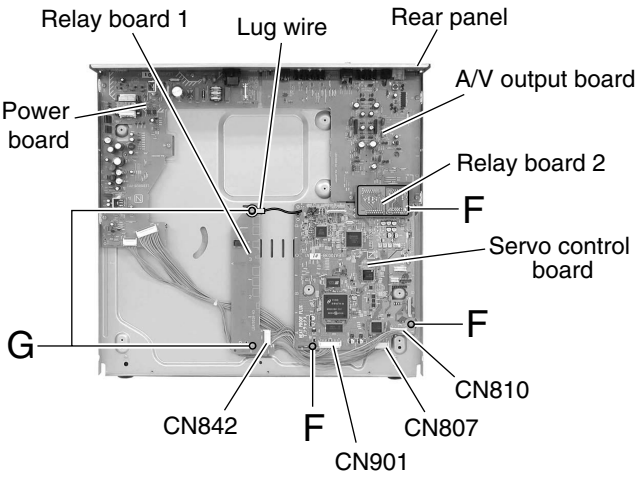


Fig.12

–Relay board 1–

1. Disconnect the wire from connector CN842 on the relay board 1.

2. Remove the two screws **G** attaching the relay board.

–A/V output board–

1. Pull out the relay board 2 on the upper side of the body.

2. Remove the four screws **H** attaching the A/V output board.

3. Remove the eight screws **I** on the back of the body.

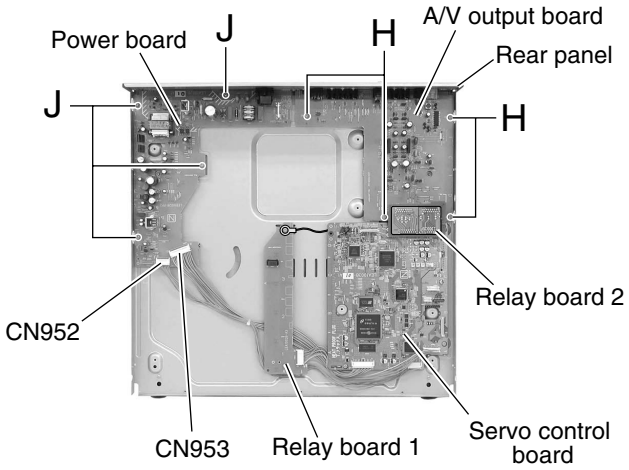


Fig.13

–Power board–

1. Disconnect the wire from connector CN952 and CN953 on the power board.

2. Remove the four screws **J** on the upper side of the body.

3. Remove the screw **K** on the back of the body.

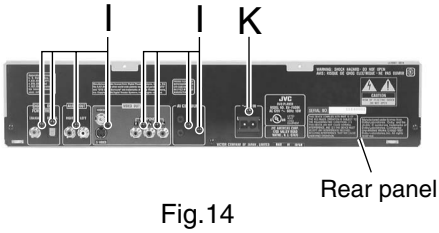


Fig.14

■ Removing the traverse mechanism assembly (See Fig.15 and 16)

・ Prior to performing the following procedure, remove the top cover and the front panel assembly.

REFERENCE: There is no need to remove the loading base assembly.

1. Eject the main tray assembly toward the front referring to “Removing the main tray assembly”.
2. Remove the two screws **L** and pull out the clamper base assembly upward.
3. Disconnect the card wire from connector CN210 on the servo control board.
4. Remove the four screws **M** and the traverse mechanism assembly upward.

CAUTION: When reattaching the traverse mechanism assembly, pass the card wire extending from the traverse mechanism assembly through the notch **d** of the elevator base.

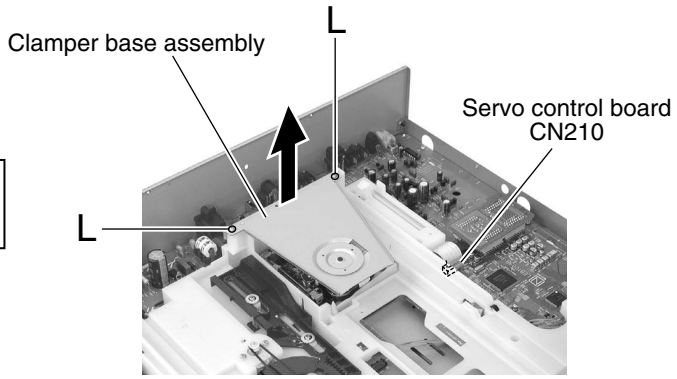


Fig.15

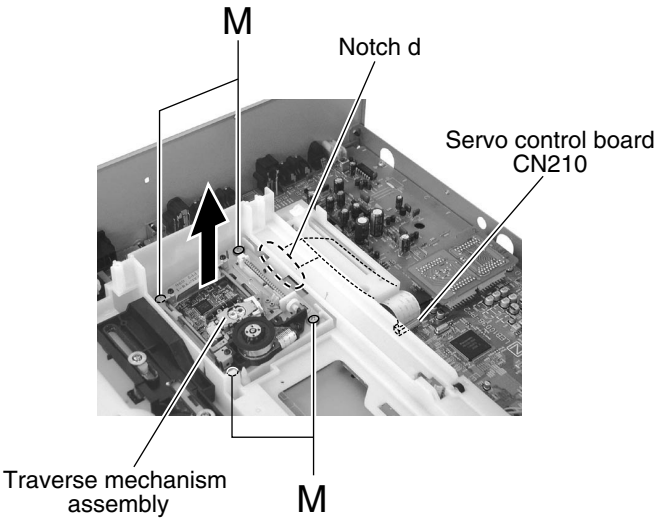


Fig.16

<Front panel assembly>

・ Prior to performing the following procedure, remove the top cover and the front panel assembly.

■ Removing the power switch board (See Fig.17)

1. Remove the two screws **N** on the back of the front panel assembly.
2. Disconnect the card wire from connector CN813 and CN806 on the power switch board.

■ Removing the operation switch board (See Fig.17)

1. Remove the six screws **O** on the back of the front panel assembly.
2. Disconnect the card wire from connector CN812 on the operation switch board.

■ Removing the FL display board (See Fig.17)

1. Remove the two screws **P** on the back of the front panel assembly.
2. Disconnect the card wire from connector CN805 on the FL display board.

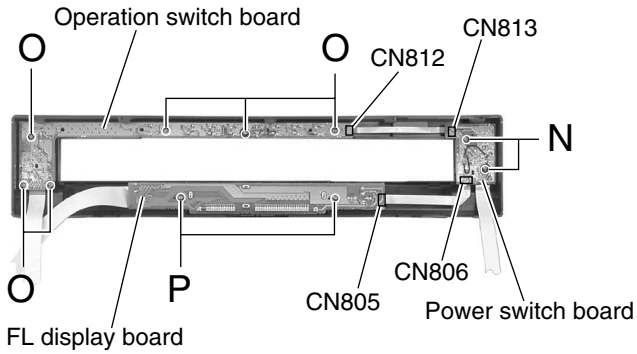


Fig.17

<Loading base assembly unit>

・ Prior to performing the following procedures, remove the top cover, the front panel assembly, the main tray assembly, the loading base assembly.

■ Removing the elevator base (See Fig.18 and 19)

REFERENCE: It is not necessary to remove the traverse mechanism assembly from the elevator base. As the removing procedure of the traverse mechanism, please refer to "Removing the traverse mechanism assembly".

1. Turn over the loading base assembly and remove the two screws **Q**.

2. Remove the elevator base upward.

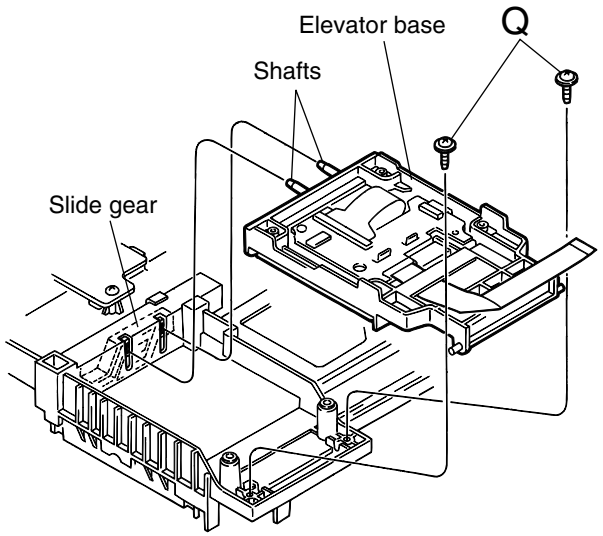


Fig.18

– Reattaching the elevator base –

REFERENCE: From above the loading base, turn the load base counterclockwise until the slide gear stops at the back end as shown in Fig.19.

1. Reattach the elevator base to the loading base assembly while fitting the two shafts on the side of the elevator base to the grooves of the slide gear.

2. Reattach the two screws **Q**.

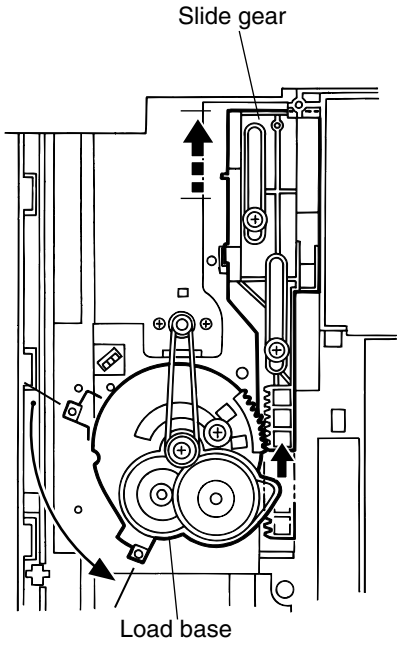


Fig.19

■ Removing the belt / load base / slide gear

・ Prior to performing the following procedures, remove the elevator base.

1. Remove the belt on the upper side of the loading base assembly.
2. Remove the screw **R** attaching the pulley gear.
3. Remove the pulley gear, the gear 1, the gear 2 and the belt respectively.
4. Remove the screw **S** and the load base upward.
5. Remove the two screws **T** and the slide gear upward.

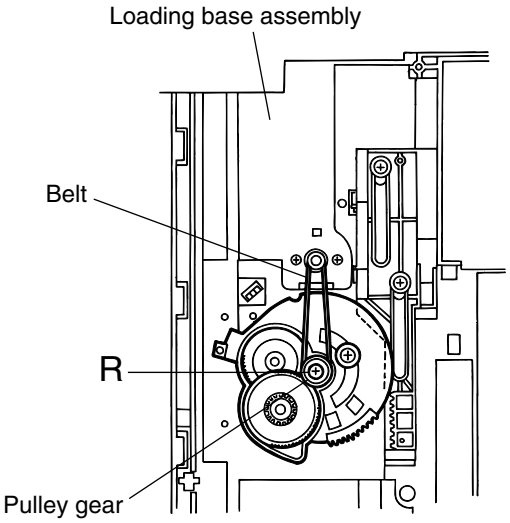


Fig.20

CAUTION: When reattaching the slide gear and the load base,

1. Move the slide gear toward the front until it stops (Fig.23).
2. Make sure that the part **d** of the load base is out of alignment with the switch **e** and that the gear **f** is disengaged from the slide gear.

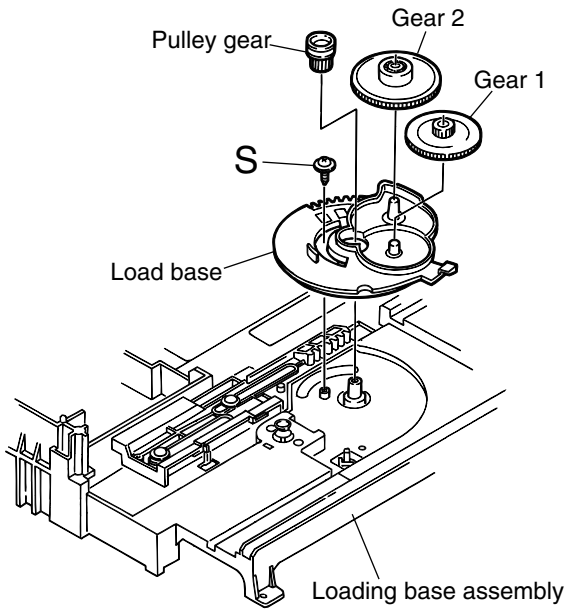


Fig.21

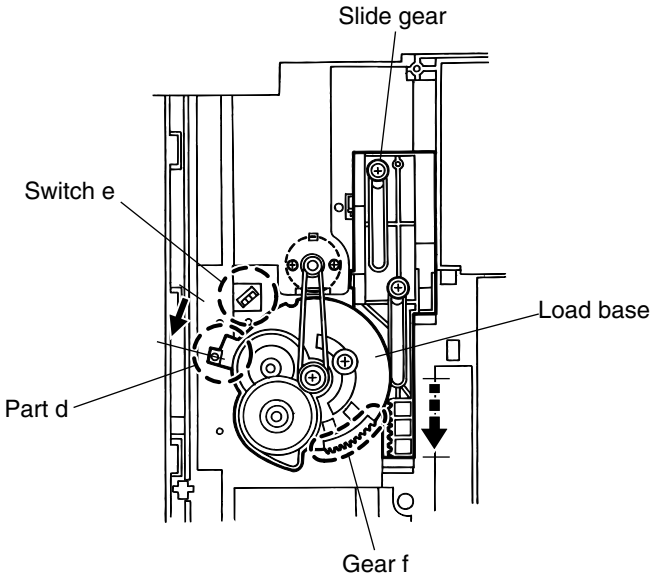


Fig.23

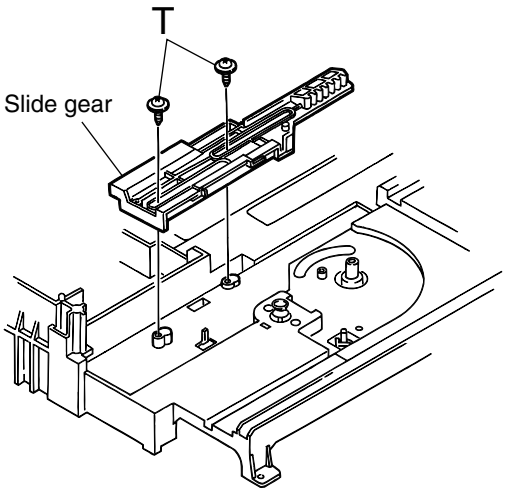


Fig.22

■Removing the loading motor / loading motor board (See Fig.24 and 25)

1. Remove the two screws **U** attaching the loading motor on the upper side of the loading base assembly.

2. Turn over the loading base assembly and unsolder the two soldering **g** on the loading motor board.

3. Remove the two screws **V** attaching the loading motor board.

4. Spread apart the two tabs **h** and pull out the loading motor.

CAUTION: When reattaching the loading motor board, settle the wires on the two hooks **i** on the loading base assembly and draw the other end to the left as shown in Fig.26.

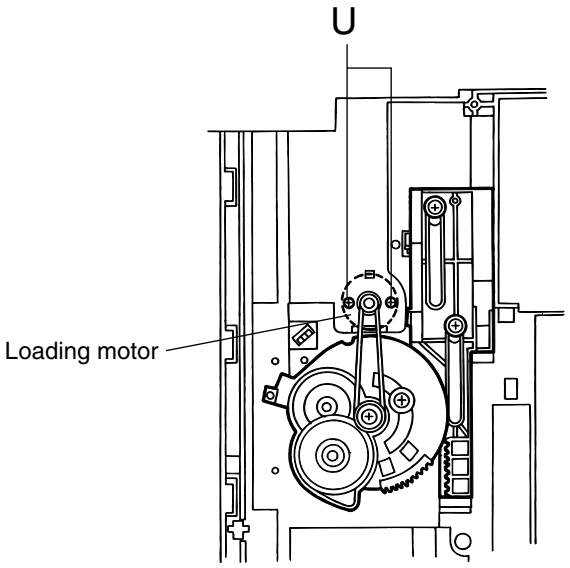


Fig.24

■Removing the tray switch board (See Fig.26)

1. Turn over the loading base assembly, and remove the tray switch board while spreading apart the two tabs **j**.

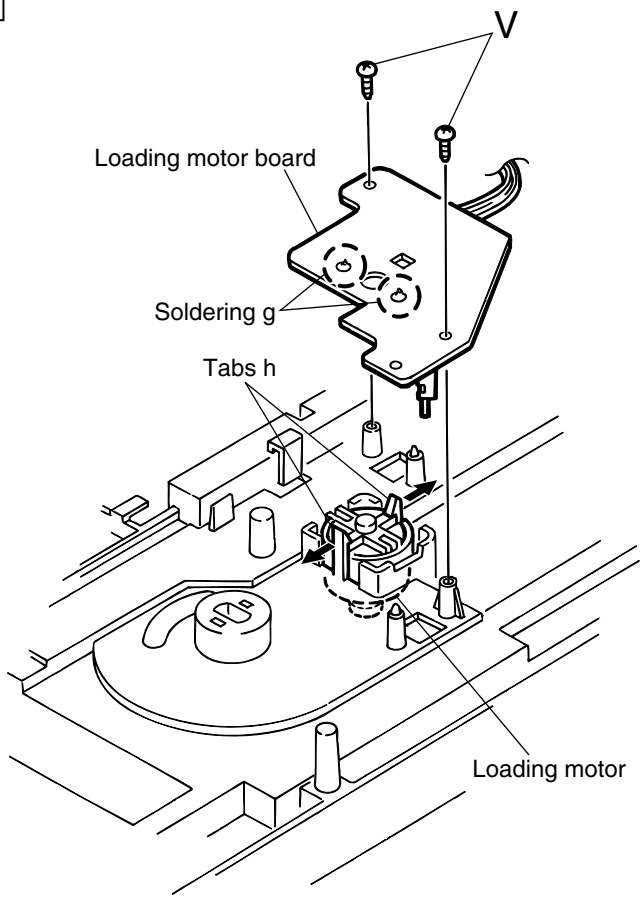


Fig.25

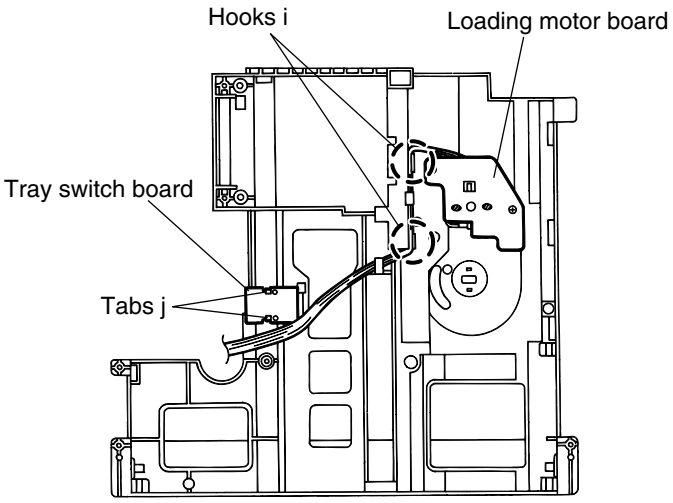


Fig.26

<Traverse mechanism unit>

■Removing the pickup (See Fig.1 to 5)

※It is not necessary to remove the traverse mechanism unit.

1. Solder soldering **a** on the flexible board next to the pickup unit.

2. From the bottom of the traverse mechanism unit, disconnect the flexible wire from CN101 on the pickup board.

ATTENTION: Disconnecting the flexible wire without soldering may cause damage to the pickup.

3. Remove the screw **A** attaching the shaft stopper (R) on the upper side of the traverse mechanism unit. Pull the side of the shaft stopper (R) outward to release the joint **b** and remove it upward. Remove the skew spring at the same time.

4. Move the shaft in the direction of the arrow to release it from the part **c**.

5. Release the joint **d** with the shaft and remove the pickup with the shaft.

6. Pull out the shaft.

7. Remove the screw **B** attaching the switch actuator.

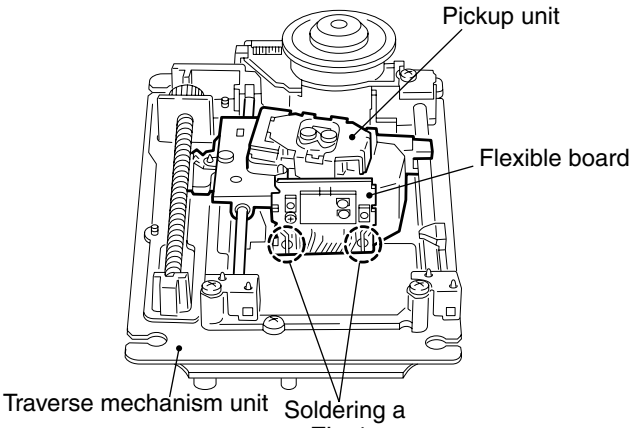


Fig.1

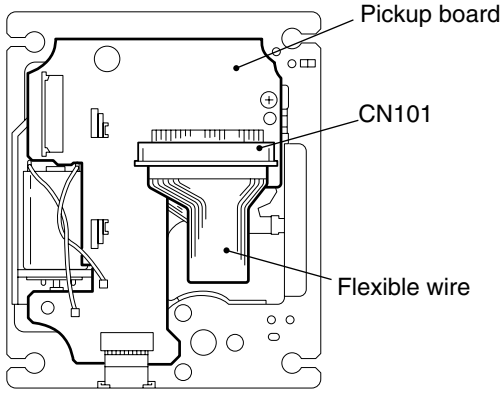


Fig.2

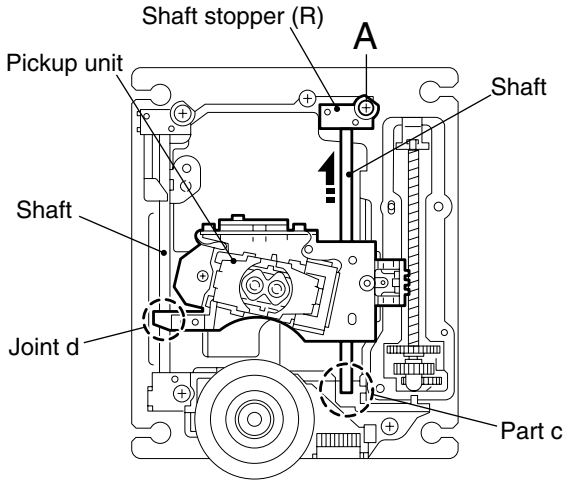


Fig.3

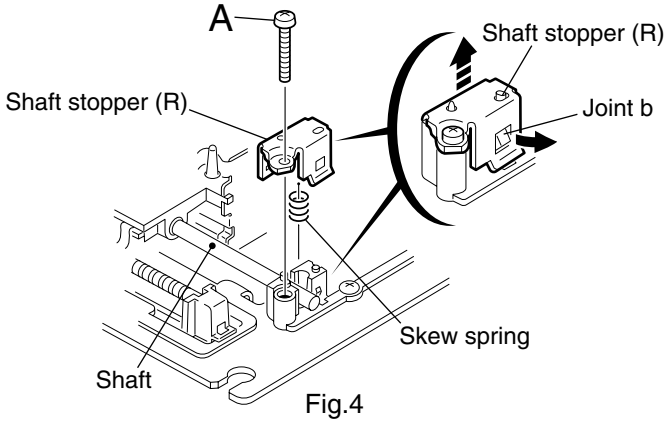


Fig.4

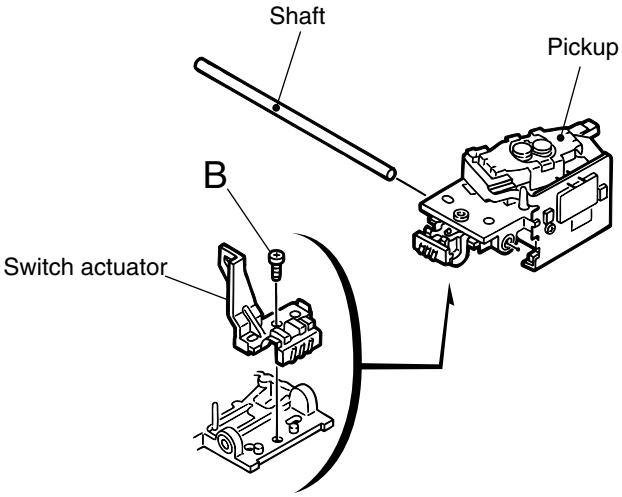


Fig.5

■ Removing the pickup board (See Fig.1 and 6)

※ It is not necessary to remove the traverse mechanism unit.

1. Solder soldering **a** on the flexible board next to the pickup unit.

2. From the bottom of the traverse mechanism unit, disconnect the flexible wire from CN101 on the pickup board.

ATTENTION:	Disconnecting the flexible wire without soldering may cause damage to the pickup.

3. Disconnect the card wire from connector CN201 on the pickup board and unsolder the soldering **e** and **f** on the harnesses

4. Remove the screw **C** attaching the pickup board and release the two joints **g**.

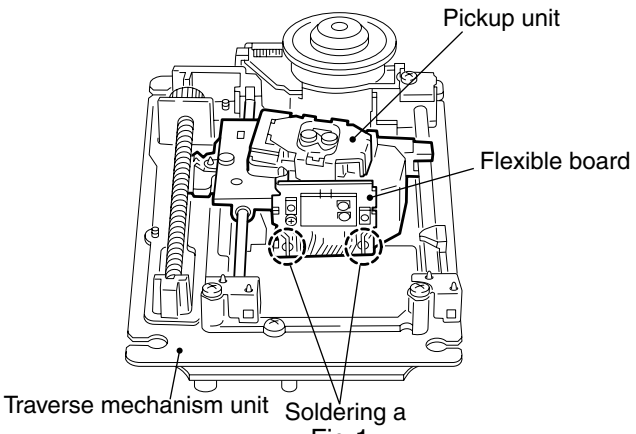


Fig.1

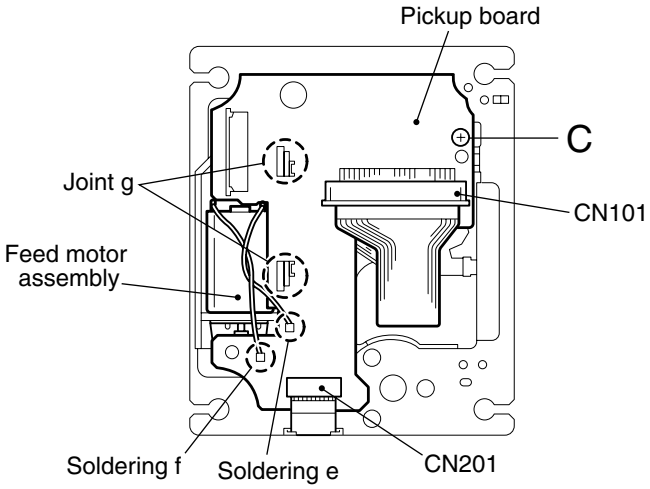


Fig.6

■ Removing the feed motor assembly (See Fig.1, 6 and 7)

・ Prior to performing the following procedure, remove the traverse mechanism unit.

1. Solder soldering **a** on the flexible board next to the pickup unit.

2. From the bottom of the traverse mechanism unit, disconnect the flexible wire from CN101 on the pickup board.

ATTENTION:	Disconnecting the flexible wire without soldering may cause damage to the pickup.

3. Remove the pickup board.

4. Remove the two screws **D** attaching the feed motor assembly and remove the thrust spring. Move the feed motor assembly in the direction of the arrow to pull it out from the feed holder.

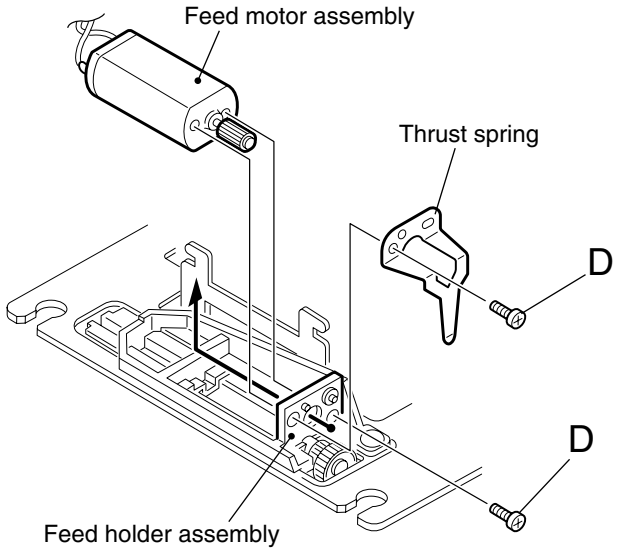


Fig.7

■Removing the turn table assembly (See Fig.6, 8 and 9)

- Prior to performing the following procedure, remove the traverse mechanism unit.

1. Disconnect the card wire extending from the turn table assembly, from connector CN201 on the pickup board.

2. Remove the screw **E** attaching the shaft stopper (F) on the upper side of the traverse mechanism unit. Pull the side of the shaft stopper (F) outward to release the joint **h** and remove it upward. Remove the spring at the same time.

3. Remove the screw **F** attaching the turn table assembly.

4. Move the turn table assembly outward and pull out from the shaft. Then remove it from the base chassis.

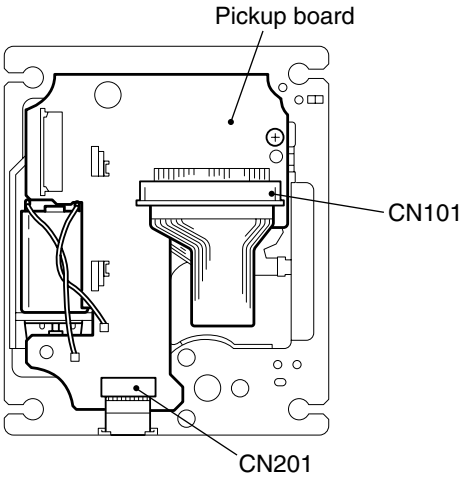


Fig.6

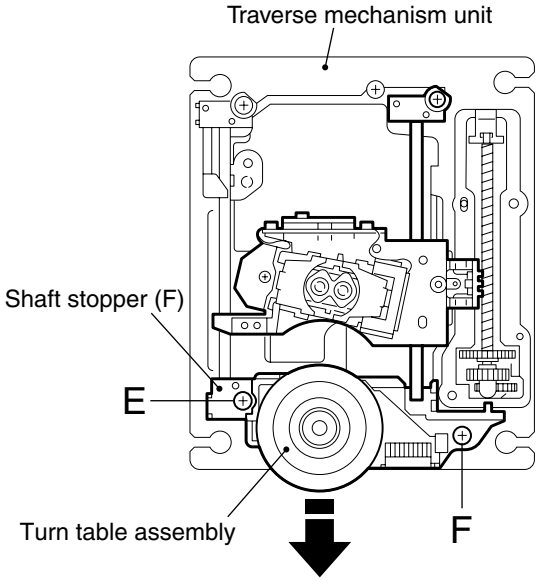


Fig.8

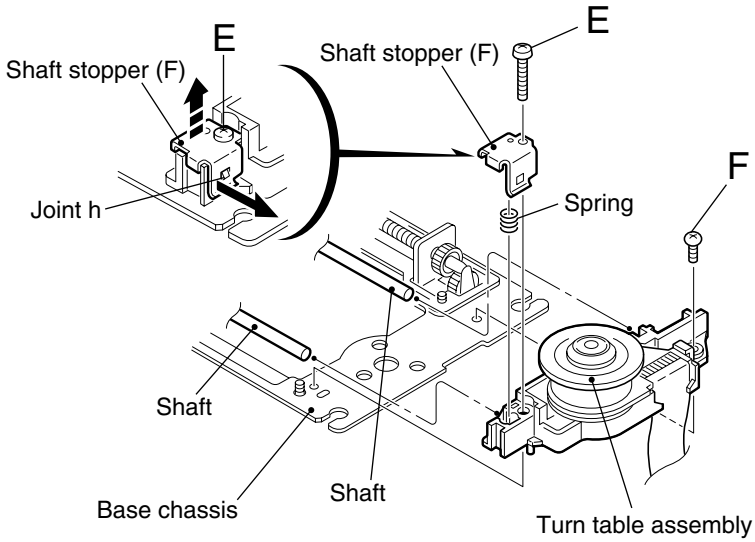


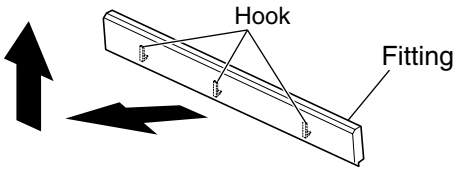
Fig.9

<Main tray assembly unit>

・ Prior to performing the following procedures, remove the top cover, the front panel assembly and the main tray assembly.

■Removing the fitting (See Fig.1)

1. Remove the fitting on the front side of the main tray assembly while releasing the four joints **a** upward.



∗ Lifts for above while pulling the hook in three places to front side.

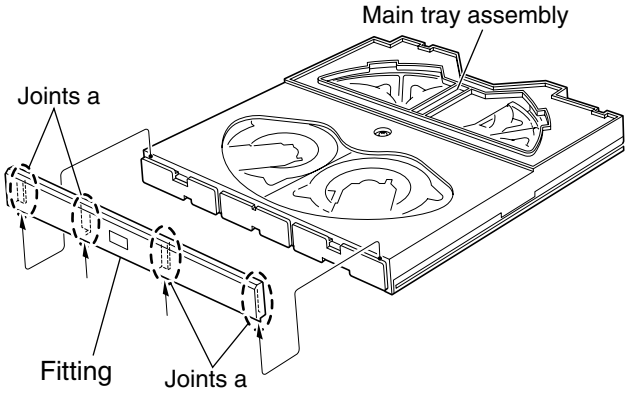


Fig.1

■Removing the main tray cover and the main tray (See Fig.2 and 3)

・ Prior to performing the following procedure, remove the fitting.

1. Remove the six screws **A** attaching the main tray on the under side of the main tray assembly.

2. Remove the screw **B** attaching the main tray cover on the upper side of the main tray assembly.

3. Push the two joint tabs **b** on the back of the main tray assembly to release the main tray cover from the tray bottom. Disengage the joint tabs **c** of the main tray from the main tray cover.

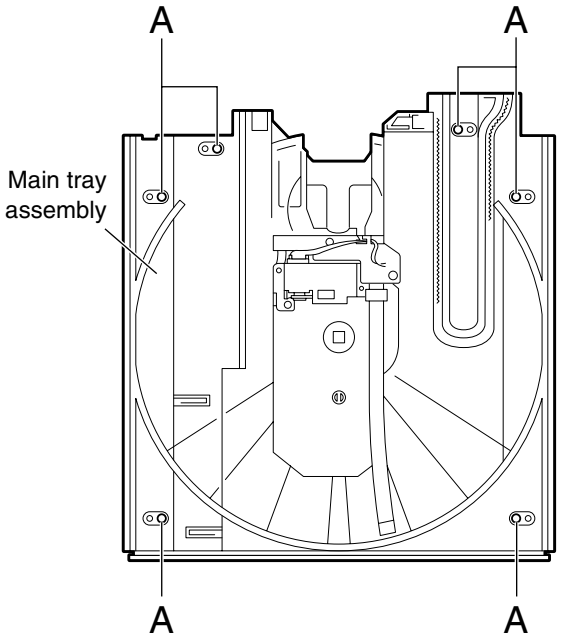


Fig.2

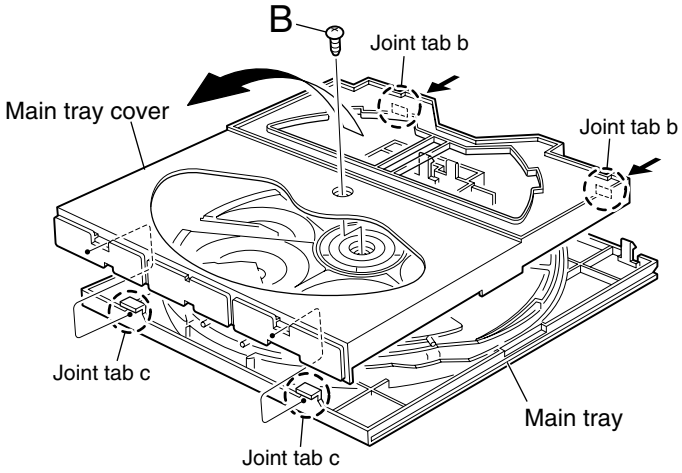


Fig.3

■ Removing the photo sensor board and the sub tray drive motor assembly (See Fig.4)

1. Turn over the main tray assembly and remove the two screws **C** attaching the photo sensor board.

2. Disconnect the card wire from connector CN082 on the photo sensor board.

> REFERENCE: Make sure to disconnect the card wire from the photo sensor board. If the photo sensor board is pulled out from the main tray without disconnecting the card wire, the cam switch side inside of the main tray may be damaged.

3. Remove the two screws **D** attaching the sub tray drive motor assembly.

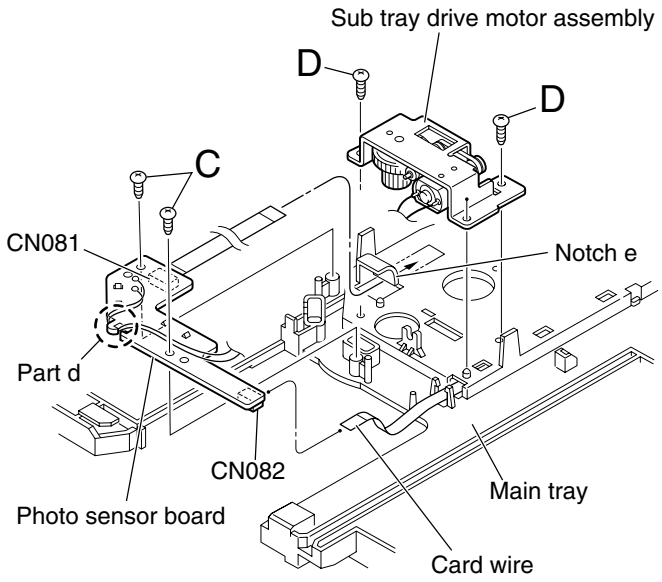


Fig.4

– When reassembling, –

・ Attach the two wires to the part **d** on the photo sensor board, and before reattaching the photo sensor board, connect the card wire to connector CN082 and pass the card wire extending from connector CN081 through the notch **e** of the main tray.

■Sub tray position and operation check (See Fig.5 and 6)

・ Prior to performing the following procedures, remove the fitting and the main tray cover.

CAUTION: Make sure the sub trays are set as shown in Fig.5. When moving the sub trays, put the sub trays which come to the position (4) and (5) forward in turn.

Prior to moving the sub trays by hand, the sub tray drive motor assembly must be removed in advance referring to the preceding page.

Do not put the sub trays forward except at the position (4) and (5).

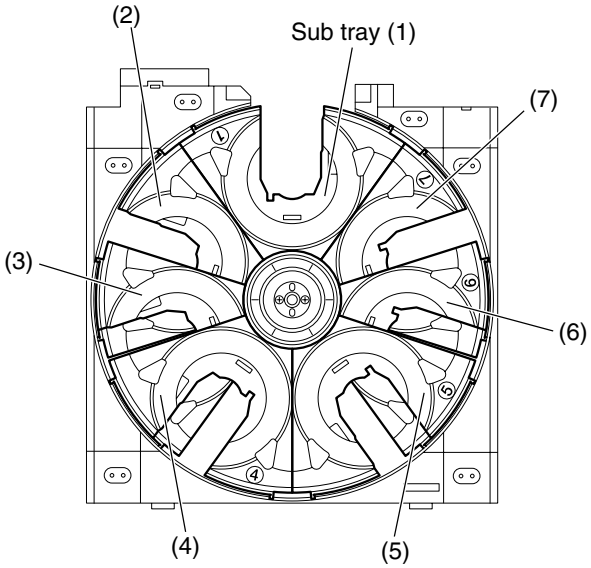


Fig.5

■Removing the U/D cam (U) (See Fig.7)

・ Prior to performing the following procedure, remove the main tray cover.

1. Remove the two screws **E** attaching the U/D cam (U) on the upper side of the main tray assembly.

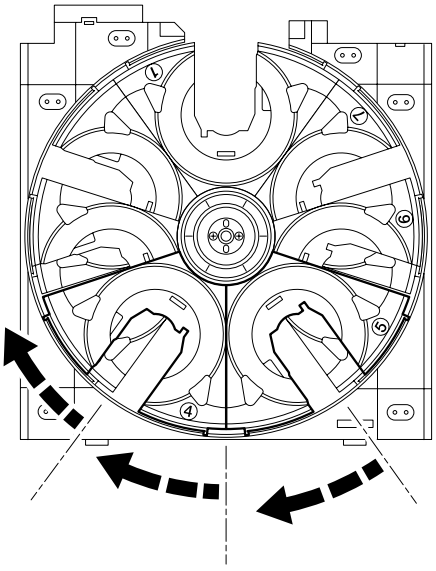
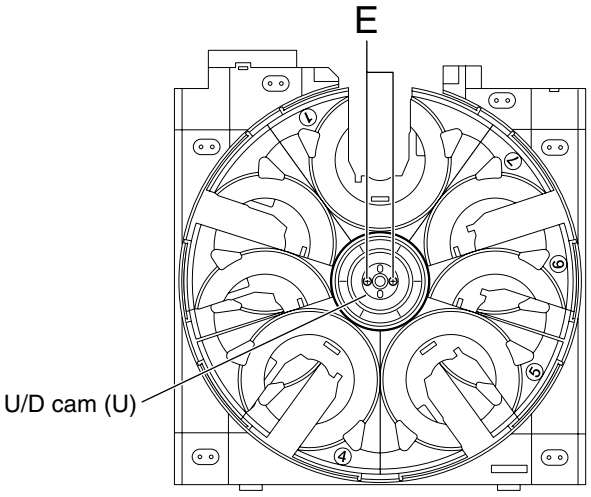


Fig.6



■ Removing the sub trays (See Fig.8 to 14)

・ Prior to performing the following procedure, remove the main tray cover and the U/D cam (U).

CAUTION: Remove the sub tray assembly (4), (3), (2), (5), (6), (7) and (1) in order. When reattaching, observe the following procedure without fail.

1. Remove the sub tray (4) and (3) from the main tray upward.
2. Remove the sub tray (2) upward.
3. Similarly, remove the sub tray (5) , (6) and (7) upward.
4. At last, remove the sub tray (1) upward.

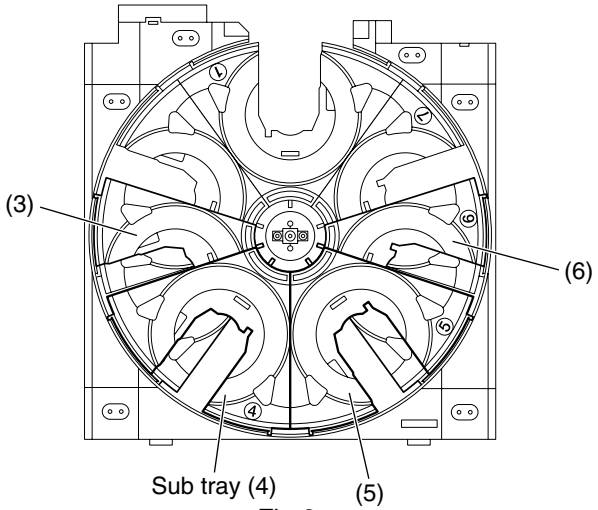


Fig.8

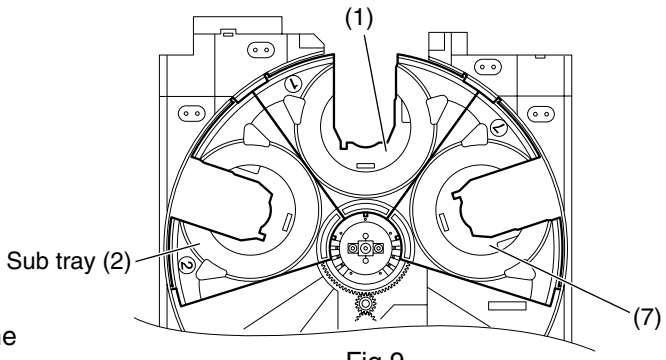


Fig.9

– Reattaching the sub tray –

1. Reattach the sub tray (1) while fitting the part **f** to the groove of the ACT. gear (1) marked **g**.
2. Reattach the sub tray (2) while inserting the shaft **h** into the groove **i** of the main tray, and at the same time, fitting the part **j** to the groove of the ACT. gear (1) marked **k** .

   Move the sub tray (2) toward the tray (1).
3. Similarly, reattach the sub tray (7).

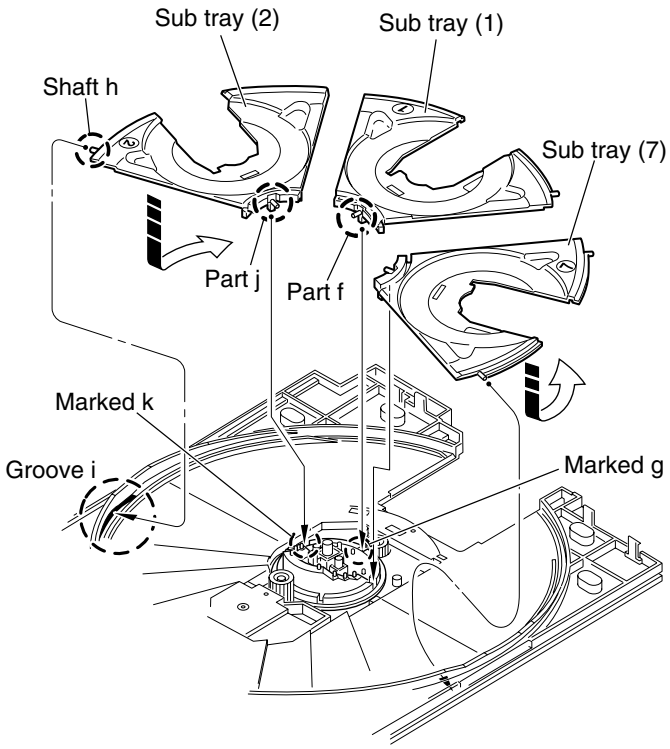


Fig.10

4. Reattach the sub tray (3) while inserting the shaft **l** into the groove **m** of the main tray, and at the same time, putting the shaft **n** on the U/D cam (L). Then, move the sub tray (3) toward the sub tray (2) until it stops.

REFERENCE:	At this point, the sub tray (3) is on top of the sub tray (2).

5 Reattach the sub tray (4) while fitting the part **o** to the ACT.gear (2) on the main tray.

CAUTION:	Make sure the part **o** of the sub tray (4) engages with the ACT. gear (2) correctly in the center of the main tray.

REFERENCE:	At this point, the sub tray (4) is on top of the sub tray (3).

6. Reattach the sub tray (6) and (5) in the same way.

CAUTION:	Make sure that the trays are attached to the correct position and that they can be moved. To move the sub trays manually, the sub tray drive motor assembly must be removed in advance.

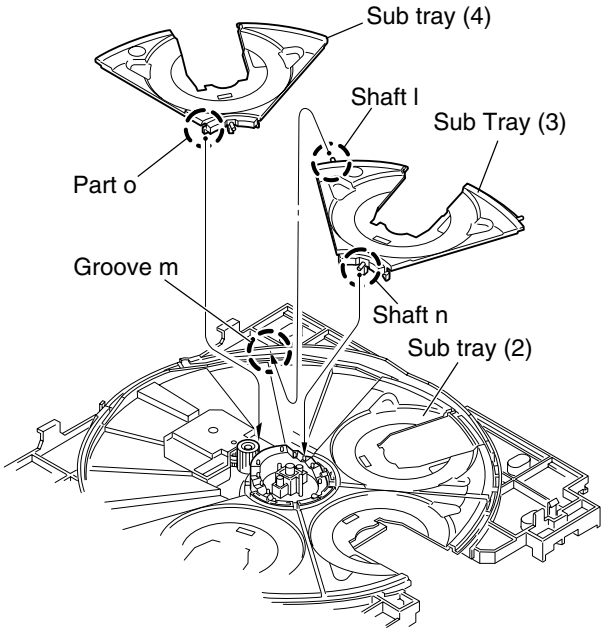


Fig.11

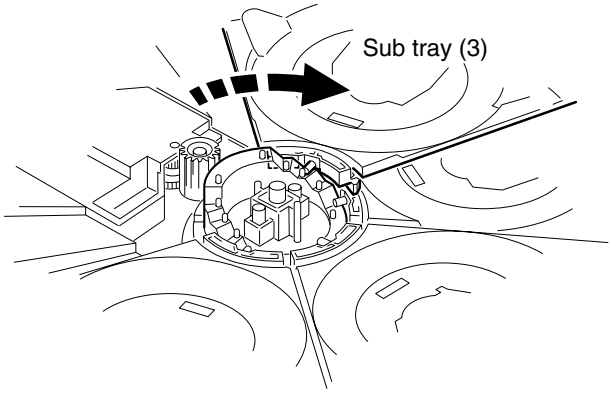


Fig.12

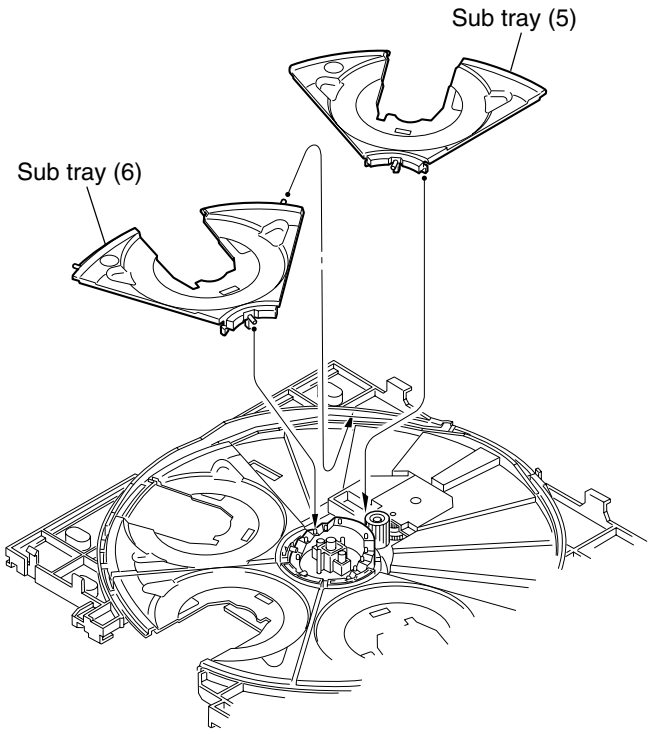


Fig.13

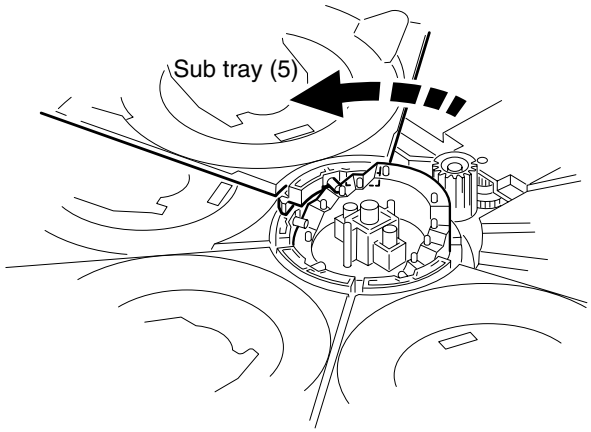


Fig.14

■ Removing the cam switch board assembly (See Fig.15 to 17)

- Prior to performing the following procedure, remove the main tray cover, the U/D cam (U) and the sub trays.

1. Remove the screw **F** attaching the gear cover. Release the two tabs marked **p** by pushing inward.
2. Remove the cam gear (2) upward.
3. Disconnect the card wire from connector CN083 on the cam switch board assembly.
4. Remove the two screws **G** attaching the cam switch board assembly.

CAUTION: When reattaching the cam gear (2), set the position of the boss and the triangular mark and hole as shown in Fig.17.

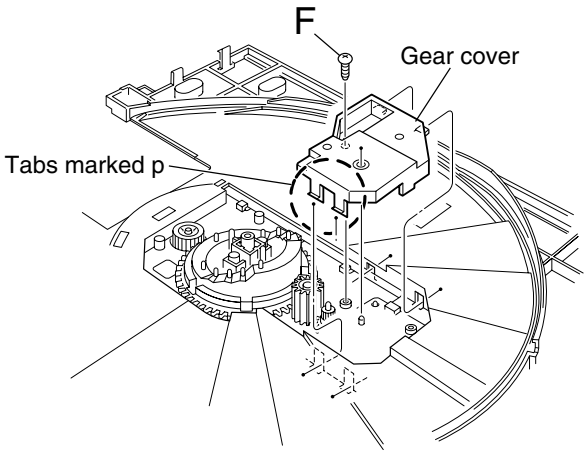


Fig.15

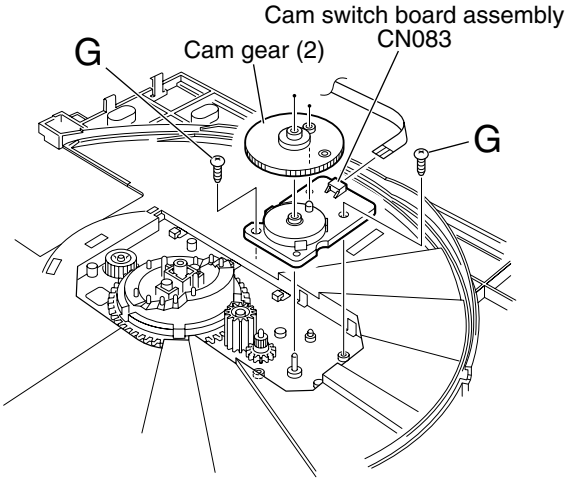


Fig.16

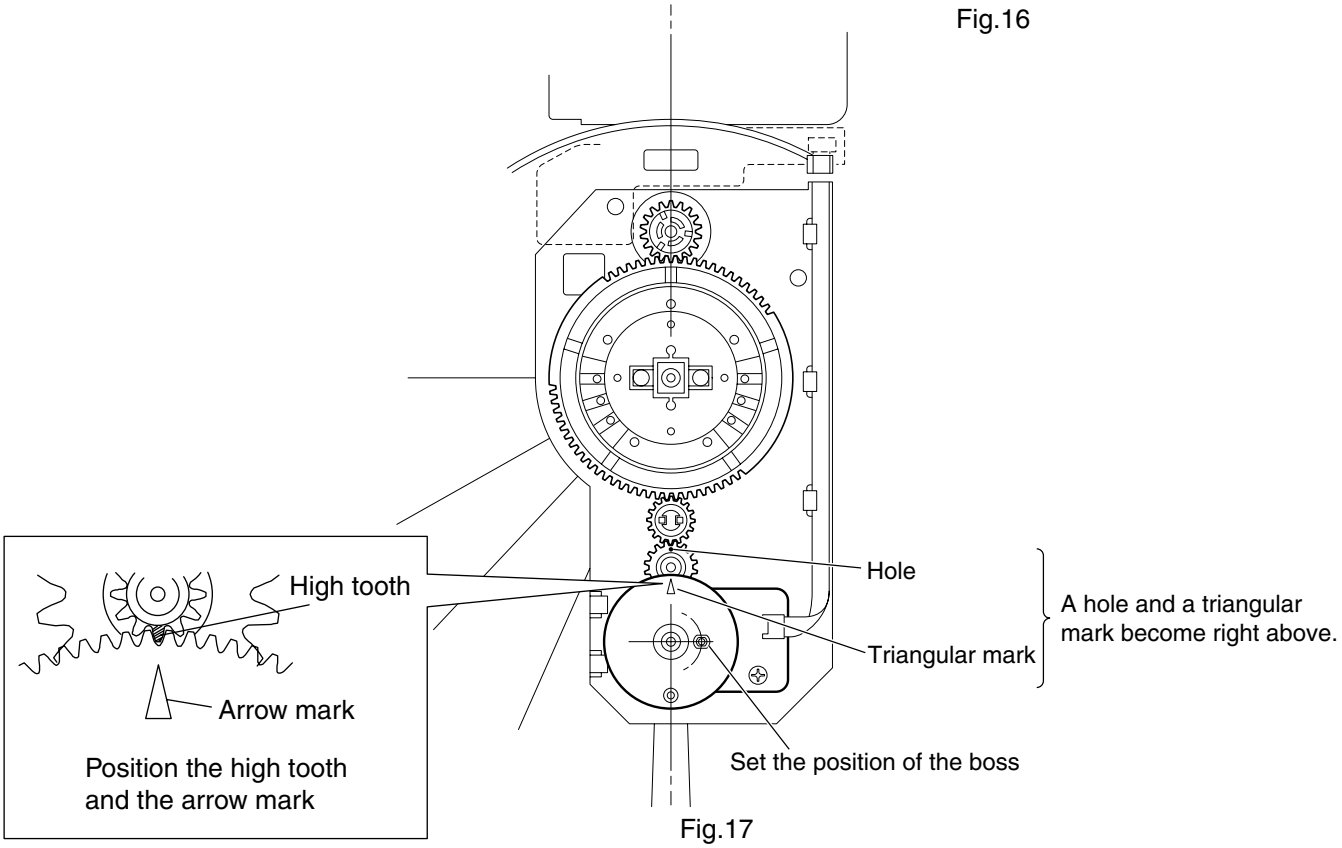

High tooth
Arrow mark
Position the high tooth and the arrow mark
Hole
Triangular mark
A hole and a triangular mark become right above.
Set the position of the boss

Fig.17

■ Removing the ACT. gear (1), U/D cam (L), cam gear (1) and ACT.gear (2) (See Fig.18 and 19)

- Prior to performing the following procedure, remove the main tray cover, the U/D cam (U) and the sub trays.

1. Draw out the U/D cam (L).
2. Draw out the ACT. gear (1).
3. Draw out the cam gear (1).
4. Draw out the ACT. gear (2) while pushing the two

CAUTION: When reassembling, make sure the position of each gear referring to Fig.19 and reattach the ACT. gear (2) first.

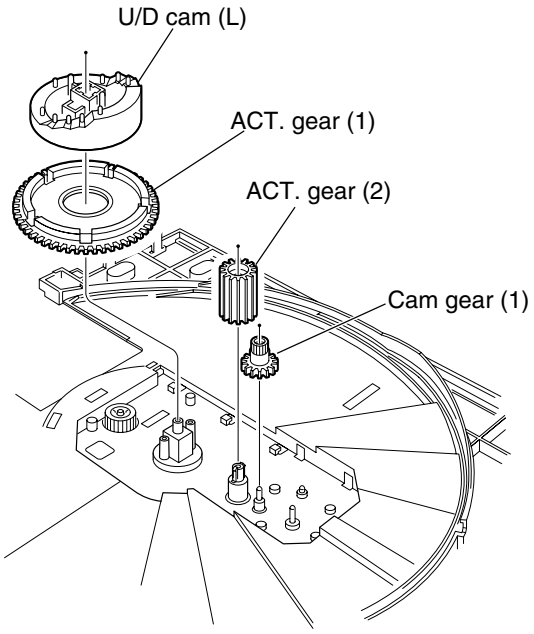


Fig.18

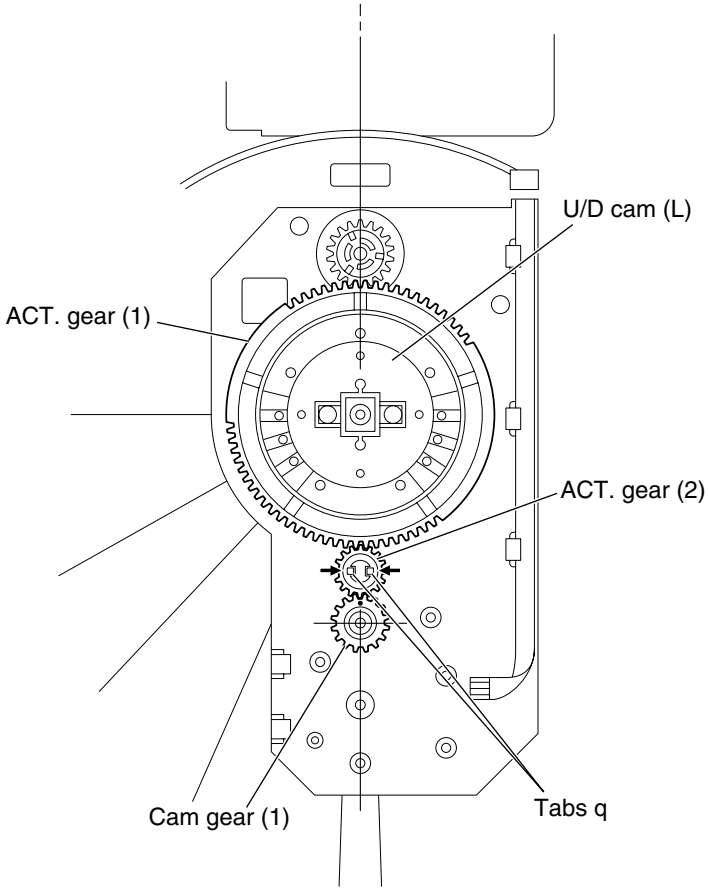


Fig.19

Adjustment method

(1) Test mode setting method

1)Take out the disc and close the tray.
2)Unplug the power plug.
3)Insert power plug into outlet while pressing both "PLAY" button and "STOP" button of the main body.
4)The player displays "TEST ＊＊ ＊" on the FL display. keeps pushing the button until this is displayed.
"＊＊ ＊" means the player version.
5)When the power supply is turned off, test mode is released.

The mode changes as follows whenever the "CHOICE" button of remote control is pushed in test mode.

TEST_＊＊_＊	Becomes test mode
＊＊_＊＊_＊＊_＊＊	Version of microcomputer
CHECK	Check mode
FL display becomes all lighting	Confirmation of FL display
EXPERT	Not use mode

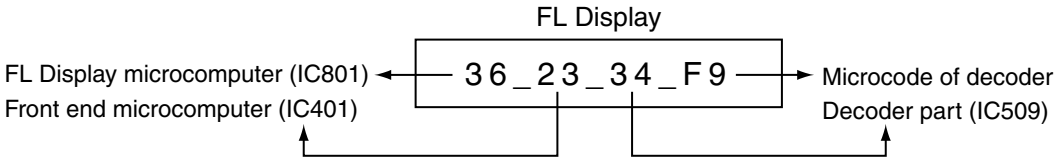
(2) Initialization method

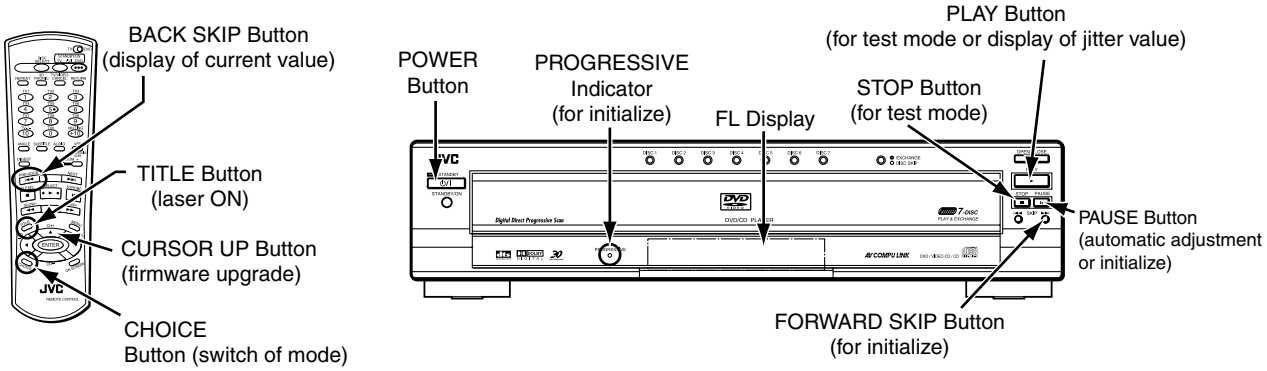
Please initialize according to the following procedures when microprocessor or pick-up is exchanged and when the up-grade is done.

1)Makes to test mode.
2)After "FORWARD SKIP" button (▶▶|) of the main body is pushed, "PAUSE" button is pushed.
3)A green progressive indicator lights when about ten seconds pass. Then, it is initialization completion.
(When scan mode is set to the progressive scanning, the indicator is green from red.)

(3) Method of displaying version of microcomputer

1)Makes to test mode and initializes
2)When "CHOICE" button of remote control is pushed once, the figure is displayed on the FL display as follows.





(4) Display of current value of laser

1)Makes to test mode and initializes
2)When "CHOICE" button of remote controller is pushed twice, It is displayed on the FL display, "CHECK".
3)The display of FL display changes from "CHECK" into "LD_ON" if the "TITLE" button of remote controller is pushed.
4)The laser is turned on if the "BACK SKIP" button (⏮) of remote controller is pushed in the state, and the current value of the laser is displayed on the FL display.

FL Display

LD_0042

As for the current value of the laser, the figure displayed on the FL display becomes a current value as it is by "mA" unit. becomes 42mA if displayed as 42.

5)The laser changes from DVD into CD if 3) and 4) of the above-mentioned procedures are done after the tray is opened and closed pushing the "OPEN/CLOSE" button of the main body. (The laser changes whenever this is done.)

If the laser current value is 64mA or less, it is roughly good. There is a possibility to which pick-up is deteriorated, and exchange pick-up, please when there are 65mA or more laser current value.

(5) Display of jitter value

1)Makes to test mode and initializes
2)When "CHOICE" button of remote controller is pushed twice, It is displayed on the FL display, "CHECK".
3)The automatic adjustment starts when test disk (VT-501) is inserted, and "PAUSE" button of the main body is pushed.
4)When the display of the FL display changes into "CHECK OK", the "PLAY" button of the main body is pushed.
5)The jitter value is displayed on the FL display as follows.

FL Display

JIT_3978

The jitter value is displayed by the hexadecimal number and refer to the conversion table of following, please.

If the indication value is 11% or less, it can be judged by this simple checking method that the signal read precision of the set is satisfactory.
Please do "Flap adjustment of the pick-up guide shaft" when you replace the pick-up and the spindle motor when there are 11% or more jitter value.

■ Jitter value

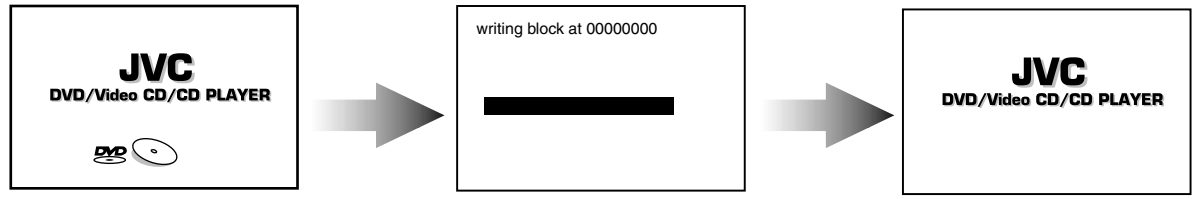
FL display	Conversion value(%)	FL display	Conversion value(%)	FL display	Conversion value(%)	FL display	Conversion value(%)
3818	4.7	3998	7.6	3B18	10.5	3C98	13.3
3828	4.8	39A8	7.7	3B28	10.6	3CA8	13.5
3838	4.9	39B8	7.8	3B38	10.7	3CB8	13.6
3848	5.1	39C8	7.9	3B48	10.8	3CC8	13.7
3858	5.2	39D8	8.1	3B58	10.9	3CD8	13.8
3868	5.3	39E8	8.2	3B68	11.1	3CE8	13.9
3878	5.4	39F8	8.3	3B78	11.2	3CF8	14.1
3888	5.5	3A18	8.5	3B88	11.3	3D18	14.3
3898	5.7	3A28	8.7	3B98	11.4	3D28	14.4
38A8	5.8	3A38	8.8	3BA8	11.5	3D38	14.5
38b8	5.9	3A48	8.9	3BB8	11.7	3D48	14.7
38c8	6.0	3A58	9.0	3BC8	11.8	3D58	14.8
38d8	6.1	3A68	9.1	3BD8	11.9	3D68	14.9
38E8	6.3	3A78	9.3	3BE8	12.0	3D78	15.0
38F8	6.4	3A88	9.4	3BF8	12.1	3D88	15.1
3918	6.6	3A98	9.5	3C18	12.4	3D98	15.3
3928	6.7	3AA8	9.6	3C28	12.5	3DA8	15.4
3938	6.9	3AB8	9.7	3C38	12.7	3DB8	15.5
3948	7.0	3AC8	9.9	3C48	12.7	3DC8	15.6
3958	7.1	3AD8	10.0	3C58	12.9	3DD8	15.7
3968	7.2	3AE8	10.1	3C68	13.0	3DE8	15.9
3978	7.3	3AF8	10.2	3C78	13.1	3DF8	16.0
3988	7.5			3C88	13.2		

(6) Upgrading of firmware

Please do the up-grade of the firmware after exchanging IC509,IC512,IC513.

1)The power supply is turned on pushing the "POWER" button.
2)The up-grade disk is put on sub-tray 1 pushing OPEN/CLOSE button, and the DISC1 button of the main body is pushed.
3)When FL display of the main body changes from "READING" into "UPGRADE", cursor UP button (▲) of remote controller is pushed.
4)The up-grade starts if the entire screen becomes blue and it is displayed, "writing block at 00000000".
5)The up-grade disk is taken out pushing the OPEN/CLOSE button when returning to the normal screen.
6)Please confirm the version of the microcomputer after makes to test mode and initializes.

<Display of TV screen>



After inserting the up-grade disk
In case of 3)

Upgrading (blue screen)
In case of 4)

When up-grade is completed
In case of 5)

< ATTENTION ! >
Please pull out the AC plug code after the standby indicator lights pushing the power supply button without fail after completing the repair.
The mechanism becomes initialed position.
There is a possibility to break when carrying in not initialed position the mechanism but the state.

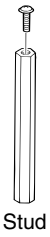
■ Flap adjustment of the pick-up guide shaft

<Tool list for adjustment>

Stud (four pieces set)
Parts No. : JIGXVS40

Hex wrench for adjustment
Off-the-shelf (1.3mm)

Test disc
VT-501 or VT-502

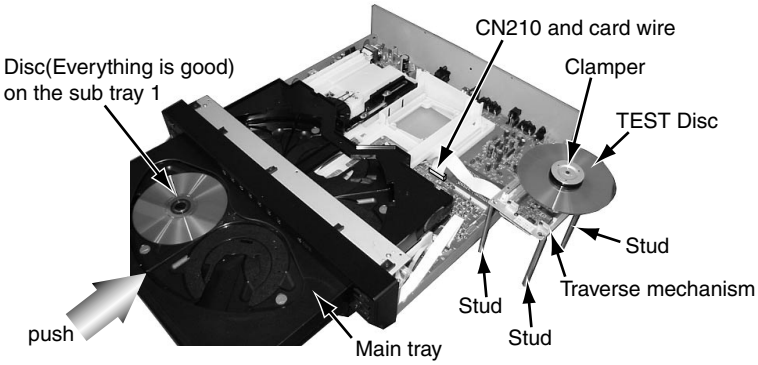


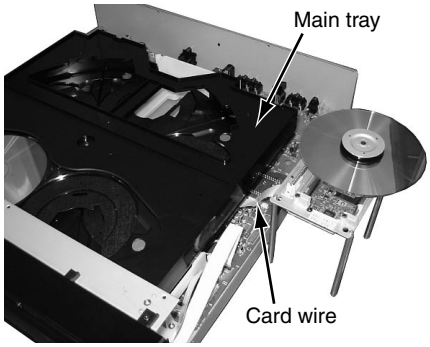
<Adjustment preparation>

1. The metal cover is detached, the OPEN/CLOSE button is pushed, and the tray is done in open.
2. The traverse mechanism is detached, and the card wire is connected with CN210.
3. The stud is installed in the traverse mechanism as shown in Figure.
   The clamper is removed from the clamper base.
4. The disk (Everything is good) is put on sub-tray 1, the test disk is put on the turntable in the traverse mechanism, and fixes by the clamper.
5. The AC plug code is pulled out once in the state.
6. The card wire becomes under the main tray, and the main tray is closed by hand power.
7. The AC plug code is inserted, and the DISC1 button is pushed
   (Please push the DISC1 button directly without pushing the power supply button).
8. Because the playback of DISC1 starts, stops and the AC plug code is pulled out.

<Adjustment method>

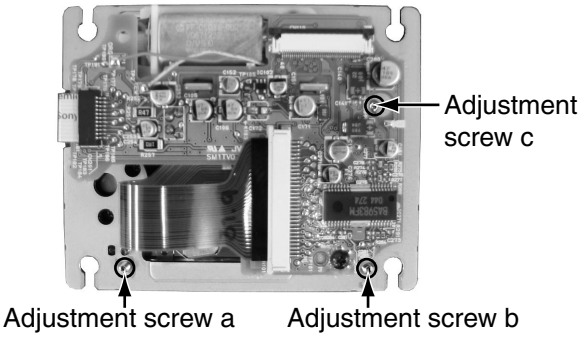
9. The AC plug code is made insertion test mode while pushing the play button and the stop button of the main body at the same time.
10. Please push the pause button after pushing the forward skip button of the main body, and confirm a green progressive indicator lights after a few seconds.
11. When the choice button of remote controller is pushed twice, it is displayed on the FL display as "CHECK".
12. The display of the FL display changes into "CHECK OK" after a few seconds if the PAUSE button of the main body is pushed in the state.
    When the PLAY button of the main body is pushed afterwards, the jitter value is displayed on the FL display.





<Adjustment>

1. Puts into the state to display the jitter value on the FL display referring to "Display of the jitter value".
2. The adjustment screw under the traverse mechanism is turned with hex wrench, and matches so that the jitter value displayed on the FL display may become minimum value.

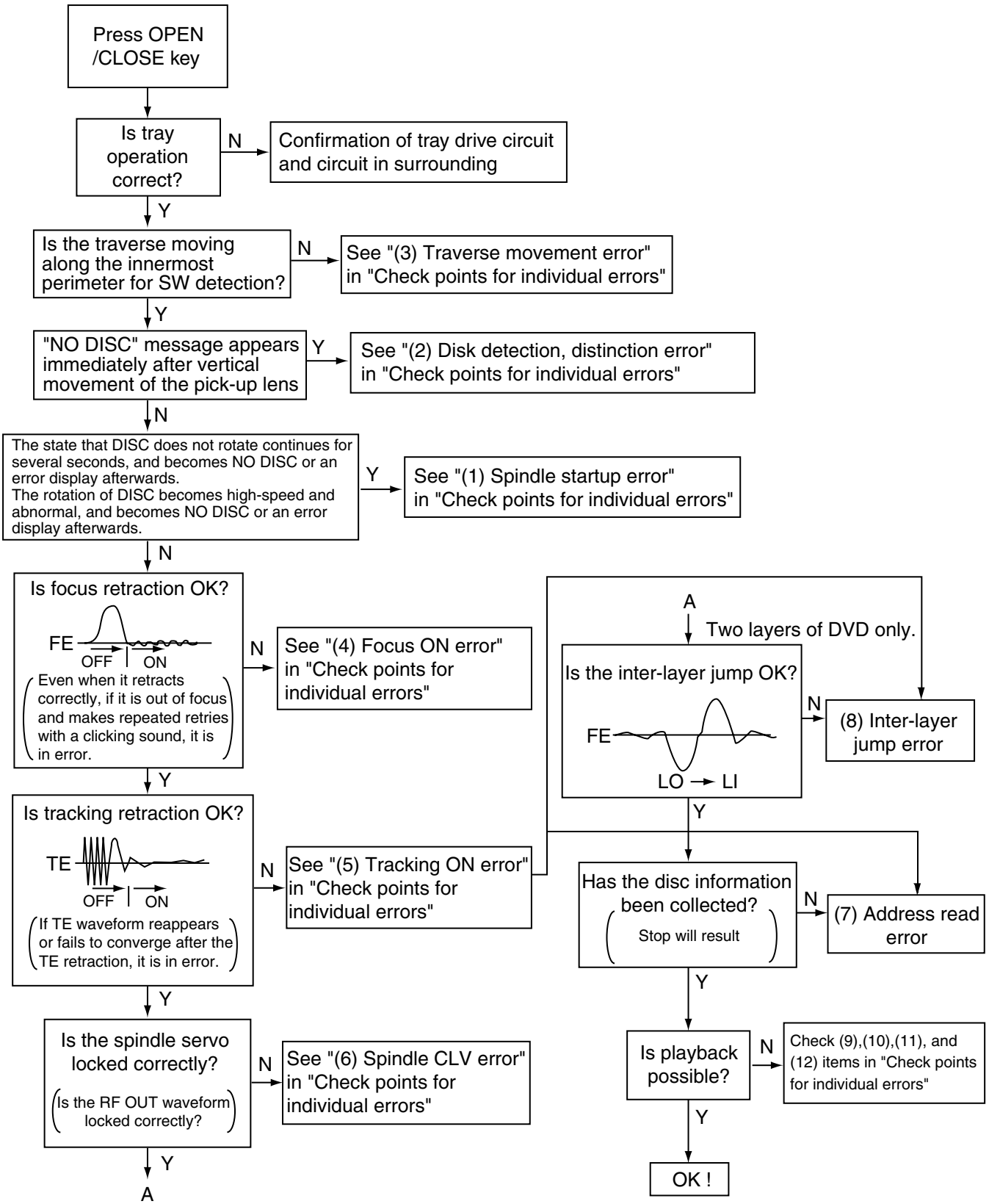


<POINT>

1. turns in the forward or the opposite direction, and makes to the position where the jitter value is good the half rotation of adjustment screw a and b(180 degrees) respectively.
2. Afterwards, adjustment screw b and c are turned in the same way, and makes to the best position.

Troubleshooting

Servo volume


Press OPEN /CLOSE key
Is tray operation correct?
N
Confirmation of tray drive circuit and circuit in surrounding
Y
Is the traverse moving along the innermost perimeter for SW detection?
N
See "(3) Traverse movement error" in "Check points for individual errors"
Y
"NO DISC" message appears immediately after vertical movement of the pick-up lens
Y
See "(2) Disk detection, distinction error" in "Check points for individual errors"
N
The state that DISC does not rotate continues for several seconds, and becomes NO DISC or an error display afterwards.
The rotation of DISC becomes high-speed and abnormal, and becomes NO DISC or an error display afterwards.
Y
See "(1) Spindle startup error" in "Check points for individual errors"
N
Is focus retraction OK?
FE
OFF
ON
Even when it retracts correctly, if it is out of focus and makes repeated retries with a clicking sound, it is in error.
N
See "(4) Focus ON error" in "Check points for individual errors"
Y
Is tracking retraction OK?
TE
OFF
ON
If TE waveform reappears or fails to converge after the TE retraction, it is in error.
N
See "(5) Tracking ON error" in "Check points for individual errors"
Y
Is the spindle servo locked correctly?
Is the RF OUT waveform locked correctly?
N
See "(6) Spindle CLV error" in "Check points for individual errors"
Y
A
A
Two layers of DVD only.
Is the inter-layer jump OK?
FE
LO → LI
N
(8) Inter-layer jump error
Y
Has the disc information been collected?
Stop will result
N
(7) Address read error
Y
Is playback possible?
N
Check (9),(10),(11), and (12) items in "Check points for individual errors"
Y
OK !

Check points for each error

(1) Spindle start error

1.Defective spindle motor

*Are there several ohms resistance between each pin of CN201 "11-10","10-9","11-9"?
(The power supply is turned off and measured.)

*Is the sign wave of about 100mVp-p in the voltage had from each terminal?
[CN201"6"(H1-),"7"(H1+),"4"(H2-),"5"(H2+),"2"(H3-),"3"(H3+)]

2.Defective spindle motor driver (IC251)

*Has motor drive voltage of a sine wave or a rectangular wave gone out to each terminal(SM1~3) of CN201"9,10,11" and IC251"2,4,7"?

*Is FG pulse output from the terminal of IC251"24"(FG) according to the rotation of the motor?

*Is it "L(about 0.9V)" while terminal of IC251"15"(VH) is rotating the motor?

3.Has the control signal come from servo IC or the microcomputer?

*Is it "L" while the terminal of IC251"18"(SBRK) is operating?
Is it "H" while the terminal of IC251"23"(/SPMUTE) is operating?

*Is the control signal input to the terminal of IC251"22"(EC)?
(changes from VHALF voltage while the motor is working.)

*Is the VHALF voltage input to the terminal of IC251"21"(ECR)?

4.Is the FG signal input to the servo IC?

*Is FG pulse input to the terminal of IC201"53"(FG) according to the rotation of the motor?

(2) Disc Detection, Distinction error (no disc, no RFENV)

<About frontend section>
* Laser is defective.
* Front End Processor is defective (IC101).
* APC circuit is defective. --- Q101,Q102.
* Pattern is defective. --- Lines for CN101 - All patterns which relate to pick-up and patterns between IC101
* Servo IC is defective (IC201).
* IC101 --- For signal from IC101 to IC201, is signal output from IC101 "20" (ASOUT) and IC101 "41"(RFENV) and IC101 "22" (FEOUT)?

<About loading mechanism section>
* The disc exists in a sub tray. However, a sub tray is sent as follows the turntable without rising.
(Especially, when the disk is CD-RW)
--- IC81 is defective. Exchanges for "GP2S28J" of the rank specification parts.

(3) Traverse movement NG

1.Defective traverse driver
*Has the voltage come between terminal of CN101 "15" and "13" ?

2.Defective BTL driver (IC271)
*Has the motor drive voltage gone out to IC271"17" or "18"?

3.Has the control signal come from servo IC or the microcomputer?
*Is it "H" while the terminal of IC271"9"(STBY1) ?
*TRSDRV Is the signal input? (IC201 "51")

4.TRVSW is the signal input from microcomputer? (IC401 "50")

(4) Focus ON NG

* Is FE output ? --- Pattern, IC101
* Is FODRV signal sent ? (R279) --- Pattern, IC201
* Is driving voltage sent ?
  IC271 "13", "14" --- If NG, pattern, driver, mechanical unit .
* Mechanical unit is defective.

(5) Tracking ON NG

* When the tracking loop cannot be drawn in, TE shape of waves does not settle.
* Mechanical unit is defective.
  Because the self adjustment cannot be normally adjusted, the thing which cannot be normally drawn in is thought.
* Periphery of driver (IC271)
  Constant or IC it self is defective.
* Servo IC (IC201)
  When improperly adjusted due to defective IC.

(6) Spindle CLV NG

* IC101 -- "35"(RF OUT), "30"(RF-), "31(RF+).
* Does not the input or the output of driver's spindle signal do the grip?
* Has the tracking been turned on?
* Spindle motor and driver is defective.
* Additionally, "IC101 and IC201" and "Mechanism is defective(jitter)", etc. are thought.

(7) Address read NG

* Besides, the undermentioned cause is thought though specific of the cause is difficult because various factors are thought.
  Mechanism is defective. (jitter)
  IC201, IC301, IC401.
  The disc is dirty or the wound has adhered.

(8) Between layers jump NG (double-layer disc only)

Mechanism defective
Defect of driver's IC(IC271)
Defect of servo control IC(IC201)

(9) Neither picture nor sound is output

1.It is not possible to search
*Has the tracking been turned on?
*To "(5) Tracking ON NG" in "Check points for each error" when the tracking is not normal.
*Is the feed operation normal?
To "(3) traverse movement NG" in "Check points for each error" when it is not normal.
Are not there caught of the feeding mechanism etc?

(10) Picture is distorted or abnormal sound occurs at intervals of several seconds.

Is the feed operation normal?
Are not there caught of the feeding mechanism etc?

(11) Others

The image is sometimes blocked, and the image stops.
The image is blocked when going to outer though it is normal in surroundings in the disk and the stopping symptom increases.

} There is a possibility with bad jitter value for such a symptom.

(12) CD During normal playback operation

a) Is TOC reading normal?
Displays total time for CD-DA.
Shifts to double-speed mode for V-CD.

↓ YES

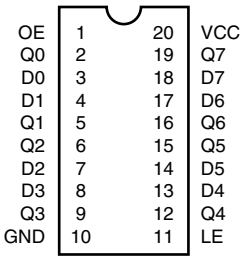
b)Playback possible? → NO

*--:-- is displayed during FL search.
According to [It is not possible to search] for DVD(9), check the feed and tracking systems.
*No sound is output although the time is displayed.(CA-DA)
DAC, etc, other than servo.
*The passage of time is not stable, or picture is abnormal.(V-CD)
*The wound of the disc and dirt are confirmed.

Description of major ICs

■ 74LCX373MTC-X(IC512,IC513)

1.Pin layout



2.Pin function

Symbol	Description
D0~D7	Data inputs
LE	Latch enable input
$\overline{OE}$	Output enable input
Q0~Q7	3-State latch outputs

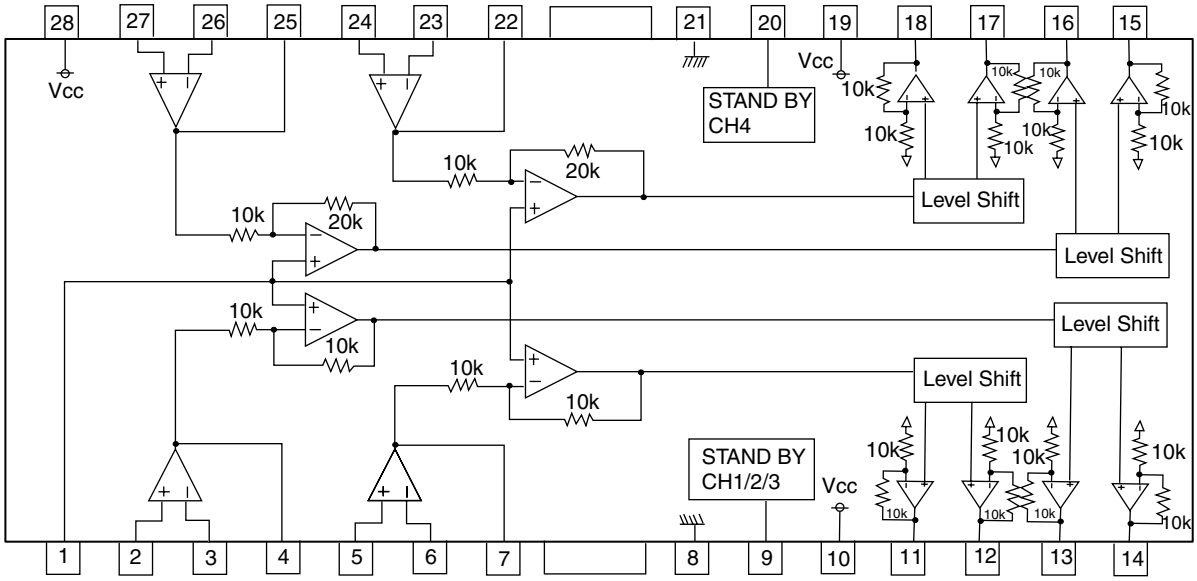
3.Truth table

INPUTS			OUTPUTS
LE	$\overline{OE}$	Dn	Qn
X	H	X	Z
H	L	L	L
H	L	H	H
L	L	X	Q0

H = HIGH Voltage level
L = LOW Voltage level
Z = High impedance
X = Immaterial
Q0 = Previous Q0 before HIGH to LOW transition of latch enable

■ BA5983FM-X (IC271) : 4CH DRIVER

1.Block diagram

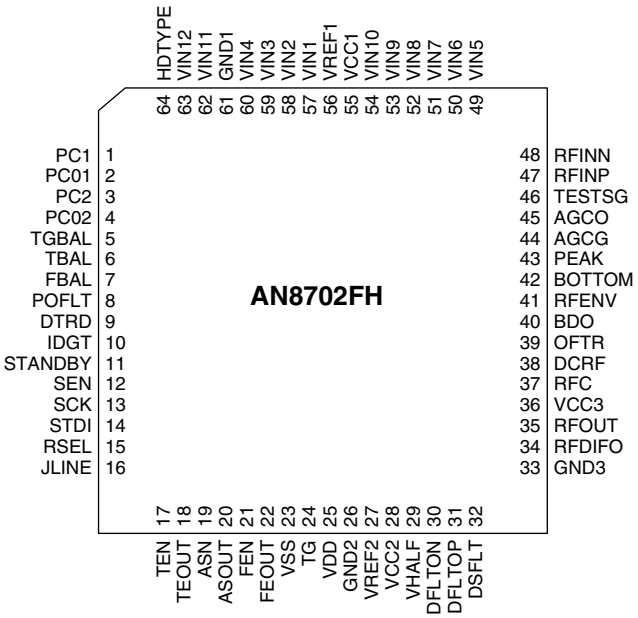


2.Pin function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	BIAS IN	I	Input for Bias-amplifier	15	VO4(+)	O	Non inverted output of CH4
2	OPIN1(+)	I	Non inverting input for CH1 OP-AMP	16	VO4(-)	O	Inverted output of CH4
3	OPIN1(-)	I	Inverting input for CH1 OP-AMP	17	VO3(+)	O	Non inverted output of CH3
4	OPOUT1	O	Output for CH1 OP-AMP	18	VO3(-)	O	Inverted output of CH3
5	OPIN2(+)	I	Non inverting input for CH2 OP-AMP	19	PowVcc2	-	Vcc for CH3/4 power block
6	OPIN2(-)	I	Inverting input for CH2 OP-AMP	20	STBY2	I	Input for Ch4 stand by control
7	OPOUT2	O	Output for CH2 OP-AMP	21	GND	-	Substrate ground
8	GND	-	Substrate ground	22	OPOUT3	O	Output for CH3 OP-AMP
9	STBY1	I	Input for CH1/2/3 stand by control	23	OPIN3(-)	I	Inverting input for CH3 OP-AMP
10	PowVcc1	-	Vcc for CH1/2 power block	24	OPIN3(+)	I	Non inverting input for CH3 OP-AMP
11	VO2(-)	O	Inverted output of CH2	25	OPOUT4	O	Output for CH4 OP-AMP
12	VO2(+)	O	Non inverted output of CH2	26	OPIN4(-)	I	Inverting input for CH4 OP-AMP
13	VO1(-)	O	Inverted output of CH1	27	OPIN4(+)	I	Non inverting input for CH4 OP-AMP
14	VO1(+)	O	Non inverted output of CH1	28	PreVcc	-	Vcc for pre block

■ AN8702FH(IC101):Frontend processor

1.Pin layout

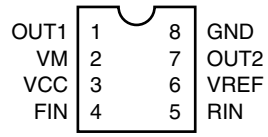


2.Pin function

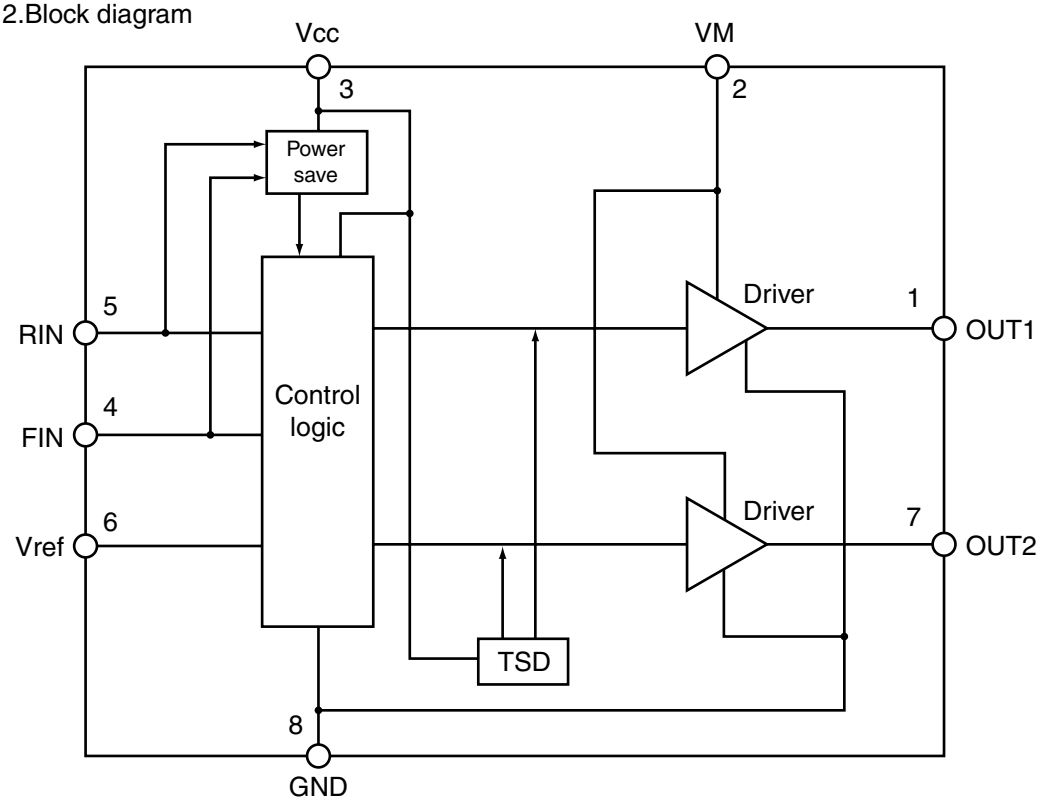
Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	PC1	I	Disc detection signal input (DVD)	34	RFDIFO		
2	PC01	I/O	Laser current control terminal	35	RFOUT	-	To TP101
3	PC2	I	Disc detection signal input (CD)	36	VCC3	-	Power supply terminal 5V
4	PC02	I/O	Laser current control terminal	37	RFC		
5	TGBAL	I	Tangential phase balance control terminal	38	DCRF	O	All addition amplifier capacitor terminal
6	TBAL	I	Tracking balance control terminal	39	OFTR	O	OFTR output terminal
7	FBAL	I	Focus balance control terminal	40	BDO	O	Drop out
8	POFLT	O	Track detection threshold level terminal	41	RFENV	O	RF envelope output terminal
9	DTRD	I	Data slice part data read signal input terminal	42	BOTTOM	O	Bottom envelope detection filter terminal
			(For RAM)	43	PEAK	O	Peak envelope detection filter terminal
10	IDGT	I	Data slice part address part gate signal input	44	AGCG	O	AGC amplifier gain control terminal
			terminal(For RAM)	45	AGCO		
11	STANDBY	I	Standby mode control terminal	46	TESTSG	I	TEST signal input terminal
12	SEN	I	SEN(Serial data input terminal)	47	RFINP	I	RF signal positive input terminal
13	SCK	I	SCK(Serial data input terminal)	48	RFINN	I	RF signal negative input terminal
14	STDI	I	STDI(Serial data input terminal)	49	VIN5	I	Focus input of external division into two terminal
15	RSEL			50	VIN6	I	Focus input of external division into two terminal
16	JLINE	I	J-line setting input(FEP)	51	VIN7	I	
17	TEN			52	VIN8	I	
18	TEOUT	O	Tracking error signal output terminal	53	VIN9	I	Focus input of external division into two terminal
19	ASN			54	VIN10	I	Focus input of external division into two terminal
20	ASOUT	O	Full adder signal output	55	VCC1	-	Power supply terminal 5V
21	FEN	I	Focus error output amplifier reversing input terminal	56	VREF1	O	VREF1 voltage output terminal
22	FEOUT	O	Focus error signal output terminal	57	VIN1	I	External division into four (DVD/CD) RF input
23	VSS	-	Connect to GND				terminal1
24	TG	O	Tangential phase error signal output terminal	58	VIN2	I	External division into four (DVD/CD) RF input
25	VDD	-	Power supply terminal 3V				terminal2
26	GND2	-	Connect to GND	59	VIN3	I	External division into four (DVD/CD) RF input
27	VREF2	O	VREF2 voltage output terminal				terminal3
28	VCC2	-	Power supply terminal 5V	60	VIN4	I	External division into four (DVD/CD) RF input
29	VHALF	O	VHALF voltage output terminal				terminal4
30	DFLTON	O	Equivalence RF-	61	GND1	-	Connect to GND
31	DFLTOP	O	Equivalence RF+	62	VIN11	I	Tracking input
32	DSFLT			63	VIN12	I	Tracking input
33	GND3	-	Connect to GND	64	HDTYPE	-	Connect to ground

■ BA6287F-X(IC451,IC452):Motor driver

1.Pin layout



2.Block diagram



3.Pin function

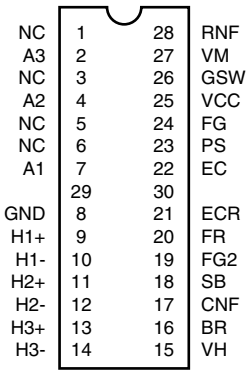
Pin No.	Symbol	I/O	Description
1	OUT1	O	Output for motor
2	VM	-	Power supply terminal for drive division
3	VCC	-	Power supply terminal for signal division
4	FIN	I	Input for control logic
5	RIN	I	Input for control logic
6	VREF	O	Output voltage level control
7	OUT2	O	Output for motor
8	GND	-	Connect to ground

4.I/O Truth value table

FIN	RIN	OUT2	OUT1	MODE
H	L	L	H	Forward rotation mode
L	H	H	L	Reverse rotation mode
H	H	L	L	Break mode
L	L	OPEN	OPEN	Standby mode

■ BA6664FM-X(IC251):Spindle motor driver

1.Pin layout

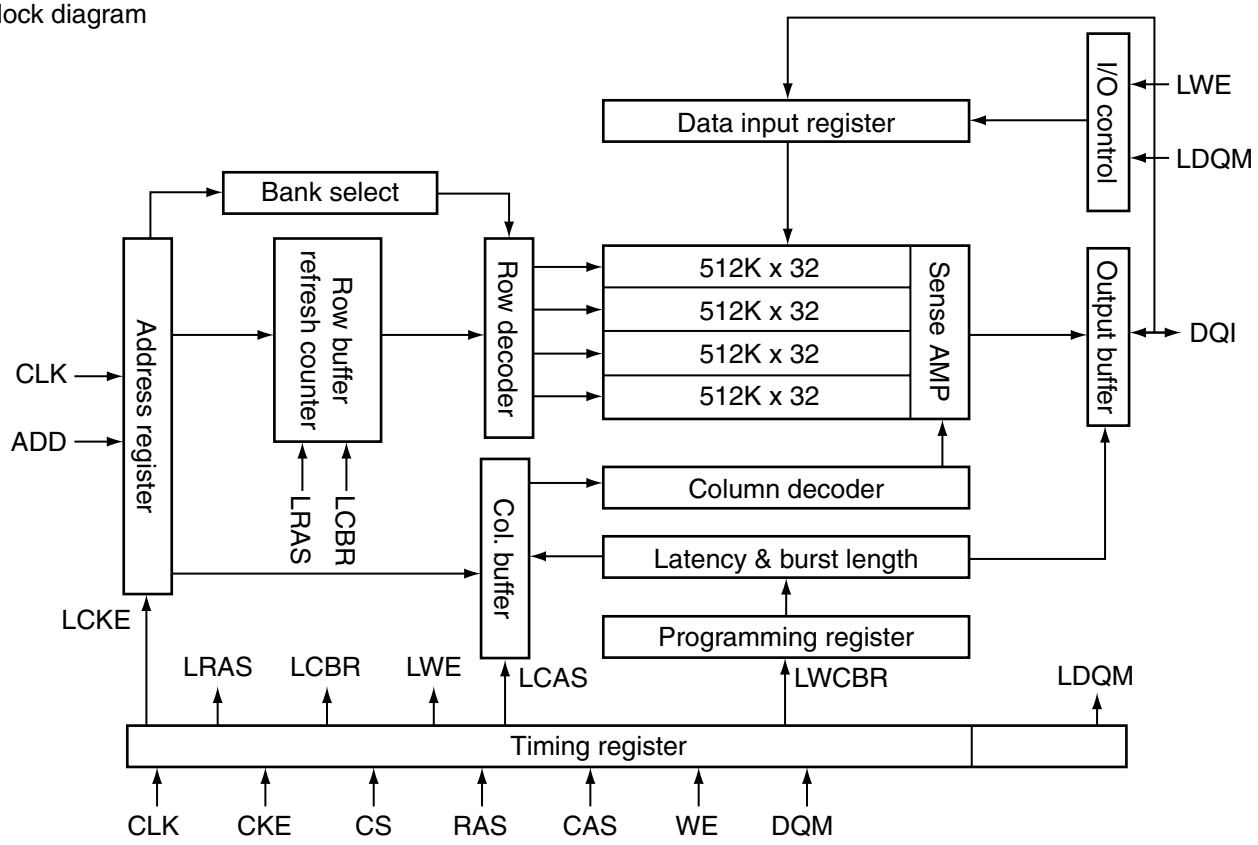


2.Pin function

Pin No.	Symbol	I/O	Description
1	NC	-	Non connect
2	A3	O	Output 3 for spindle motor
3	NC	-	Non connect
4	A2	O	Output 2 for spindle motor
5	NC	-	Non connect
6	NC	-	Non connect
7	A1	O	Output 1 for spindle motor
8	GND	-	Connect to ground
9	H1+	I	Positive input for hall input AMP 1
10	H1-	I	Negative input for hall input AMP 2
11	H2+	I	Positive input for hall input AMP 2
12	H2-	I	Negative input for hall input AMP 2
13	H3+	I	Positive input for hall input AMP 3
14	H3-	I	Negative input for hall input AMP 3
15	VH	I	Hall bias terminal
16	BR	-	Non connect
17	CNF	-	Capacitor connection pin for phase compensation
18	SB	O	Short brake terminal
19	FG2	-	Non connect
20	FR	-	Non connect
21	ECR	I	Torque control standard voltage input terminal
22	EC	I	Torque control voltage input terminal
23	PS	O	Start/stop switch (power save terminal)
24	FG	O	FG signal output terminal
25	VCC	-	Power supply for signal division
26	GSW	O	Gain switch
27	VM	-	Power supply for driver division
28	RNF	O	Resistance connection pin for output current sense
29		-	Connect to ground
30		-	Connect to ground

■ K4S643232E-TC70(IC505):DRAM

1.Block diagram



2.Pin function

Symbol	Description	Symbol	Description
CLK	System clock signal input	DQM0~3	Data input/output mask
CS	Chip select input	DQ0~31	Data input/output
CKE	Clock enable	VDD	Power supply terminal
A0~A10	Address	VSS	Connect to ground
BA0,1	Bank select address	VDDQ	Power supply terminal
RAS	Row address strobe	VSSQ	Connect to ground
CAS	Column address strobe	NC	Non connect
WE	Write enable		

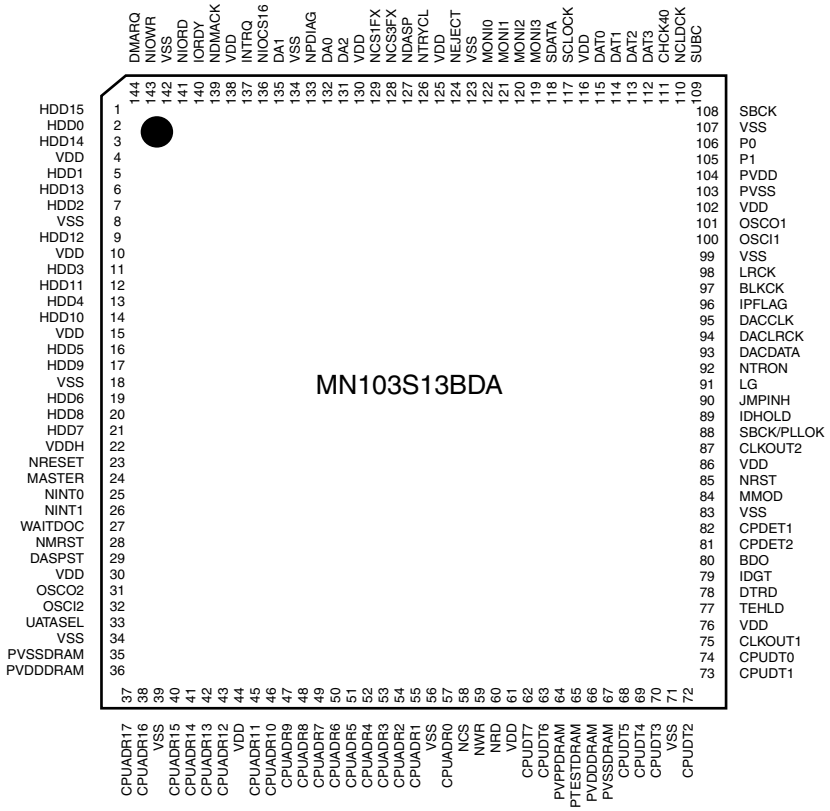
■ MN102L25GGW(IC401):Unit CPU

Pin function

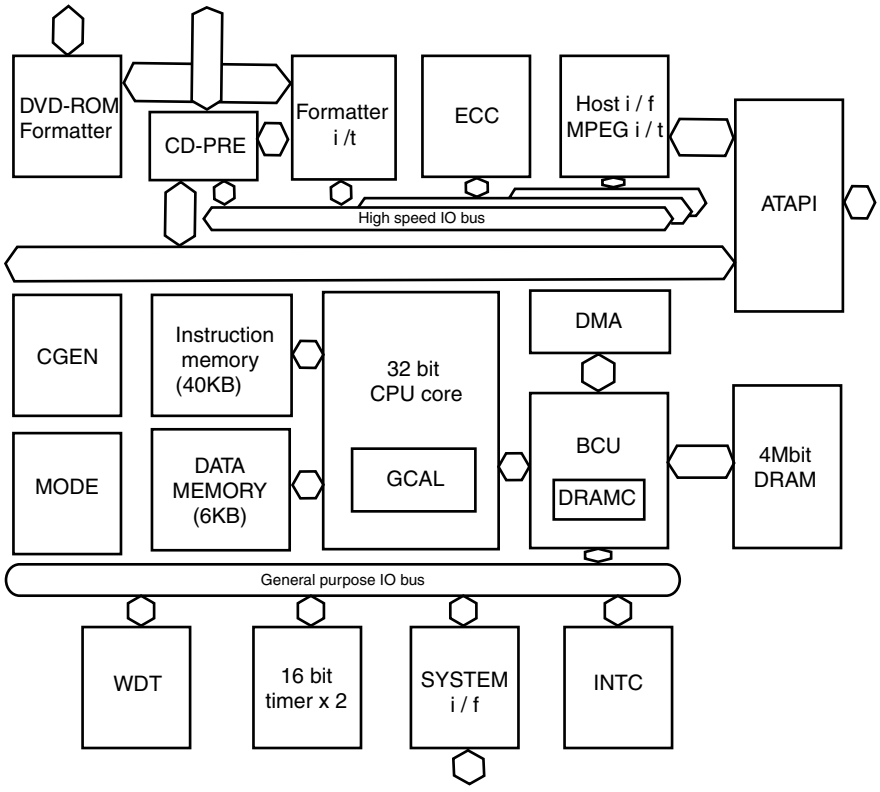
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	WAIT	I	Micon wait signal input	51	SWUPDN	I	Elevator UP/DOWN switch detect
2	RE	O	Read enable	52	SWOPEN	I	Tray OPEN/CLOSE switch detect
3	SPMUTE	O	Spindle muting output to IC251	53	ADSCEN	O	Serial enable signal for ADSC
4	WEN	O	Write enable	54	VDD	-	Power supply
5	LMMUTE	O	Loading motor standby control	55	FEPEN	O	Serial enable signal for FEP
6	CS1	O	Chip select for ODC	56	SLEEP	O	Standby signal for FEP
7	CS2	O	Chip select for CPPM	57	BUSY	-	Non connect
8	CS3	-	Connect to TP312	58	REQ	O	Communication Request
9	DRVMUTE	O	Driver mute	59	CIRCEN	O	CIRC command select
10	SPKICK	O	Spin kick (Non connect)	60	-	-	Connect to TP308
11	LSIRST	O	LSI reset	61	VSS	-	Ground
12	WORD	O	Bus selection input	62	EPCS	O	EEPROM chip select
13	A0	O	Address bus 0 for CPU	63	EPSK	O	EEPROM clock
14	A1	O	Address bus 1 for CPU	64	DPDI	I	EEPROM data input
15	A2	O	Address bus 2 for CPU	65	EPDO	O	EEPROM data output
16	A3	O	Address bus 3 for CPU	66	VDD	-	Power supply
17	VDD	-	Power supply	67	SCLKO	I	Communication clock
18	SYSCLK	-	Connect to TP169	68	S2UDT	I	Communication input data
19	VSS	-	Ground	69	U2SDT	O	Communication output data
20	XI	-	Not use (Connect to vss)	70	CPSCK	O	Clock for ADSC serial
21	XO	-	Connect to TP170	71	SDIN	I	ADSC serial data input
22	VDD	-	Power supply	72	SDOUT	O	ADSC serial data output
23	OSCI	I	Clock signal input	73	-	-	Not use
24	OSCO	O	Clock signal output	74	-	-	Not use
25	MODE	I	CPU Mode selection input	75	NMI	-	Not use
26	A4	O	Address bus 4 for CPU	76	ADSCIRQ	I	Interrupt input of ADSC
27	A5	O	Address bus 5 for CPU	77	ODCIRQ	I	Interrupt input of ODC
28	A6	O	Address bus 6 for CPU	78	DECIRQ	I	Interrupt input of ZIVA
29	A7	O	Address bus 7 for CPU	79	CSSIRQ	-	Not use
30	A8	O	Address bus 8 for CPU	80	ODCIRQ2	I	Interruption of system control
31	A9	O	Address bus 9 for CPU	81	ADSEP	I	Address data selection input
32	A10	O	Address bus 10 for CPU	82	RST	I	Reset input
33	A11	O	Address bus 11 for CPU	83	VDD	-	Power supply
34	VDD	-	Power supply	84	TEST1	I	Test signal 1 input
35	A12	O	Address bus 12 for CPU	85	TEST2	I	Test signal 2 input
36	A13	O	Address bus 13 for CPU	86	TEST3	I	Test signal 3 input
37	A14	O	Address bus 14 for CPU	87	TEST4	I	Test signal 4 input
38	A15	O	Address bus 15 for CPU	88	TEST5	I	Test signal 5 input
39	A16	O	Address bus 16 for CPU	89	TEST6	I	Test signal 6 input
40	A17	O	Address bus 17 for CPU	90	TEST7	I	Test signal 7 input
41	A18	-	Connect to TP913	91	TEST8	I	Test signal 8 input
42	A19	-	Connect to TP912	92	VSS	-	Ground
43	VSS	-	Ground	93	D0	I/O	Data bus 0 of CPU
44	A20	-	Connect to TP911	94	D1	I/O	Data bus 1 of CPU
45	TXSEL	-	Connect to TP910	95	D2	I/O	Data bus 2 of CPU
46	HAGUP	O		96	D3	I/O	Data bus 3 of CPU
47	TCLOSE	-	Connect to TP311	97	D4	I/O	Data bus 4 of CPU
48	TOPEN	-	Connect to TP310	98	D5	I/O	Data bus 5 of CPU
49	HMFON			99	D6	I/O	Data bus 6 of CPU
50	TRVSW	I	Detection switch of traverse inside	100	D7	I/O	Data bus 7 of CPU

■ MN103S13BDA(IC301):Optical disc controller

1.Pin layout



2.Block diagram



3.Pin function (1/3)

Pin No.	Symbol	I/O	Description
1	HDD15	I/O	ATAPI Data
2	HDD0	I/O	ATAPI Data
3	HDD14	I/O	ATAPI Data
4	VDD	-	Power supply 3V
5	HDD1	I/O	ATAPI Data
6	HDD13	I/O	ATAPI Data
7	HDD2	I/O	ATAPI Data
8	VSS	-	Connect to GND
9	HDD12	I/O	ATAPI Data
10	VDD	-	Power supply 2.7V
11	HDD3	I/O	ATAPI Data
12	HDD11	I/O	ATAPI Data
13	HDD4	I/O	ATAPI Data
14	HDD10	I/O	ATAPI Data
15	VDD	-	Power supply 3V
16	HDD5	I/O	ATAPI Data
17	HDD9	I/O	ATAPI Data
18	VSS	-	Connect to GND
19	HDD6	I/O	ATAPI Data
20	HDD8	I/O	ATAPI Data
21	HDD7	I/O	ATAPI Data
22	VDDH		
23	NRESET	I	ATAPI Reset input
24	MASTER	I/O	ATAPI Master/slave select
25	NINT0	O	Interruption of system control 0
26	NINT1	O	Interruption of system control 1
27	WAITDOC	O	Wait control of system control
28	NMRST	O	Reset of system control (Connect to TP302)
29	DASPST	I	Setting of initial value of DASP signal
30	VDD	-	Power supply 3V
31	OSCO2	O	Non connect
32	OSCI2	I	Non connect
33	UATASEL	I	Connect to VSS
34	VSS	-	Connect to GND
35	PVSSDRAM		Connect to VSS
36	PVDDDRAM		Connect to VDD(2.7V)
37	CPUADR17	I	System control address
38	CPUADR16	I	System control address
39	VSS	-	Connect to GND
40	CPUADR15	I	System control address
41	CPUADR14	I	System control address
42	CPUADR13	I	System control address
43	CPUADR12	I	System control address
44	VDD	-	Power supply 2.7V
45	CPUADR11	I	System control address
46	CPUADR10	I	System control address
47	CPUADR9	I	System control address
48	CPUADR8	I	System control address
49	CPUADR7	I	System control address
50	CPUADR6	I	System control address

3.Pin function (2/3)

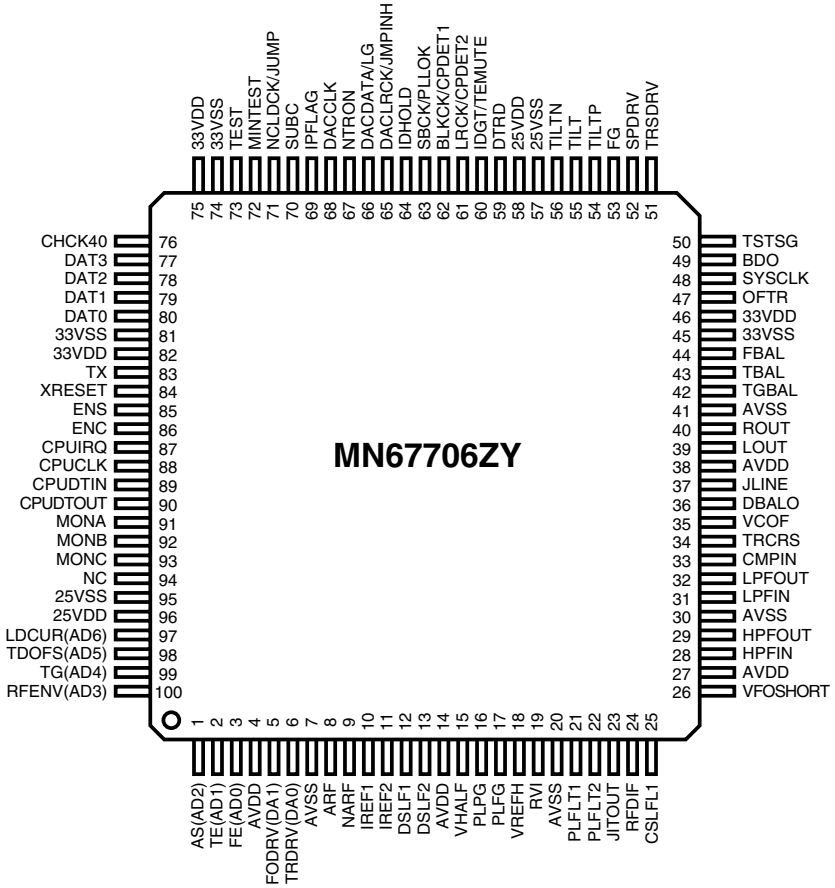
Pin No.	Symbol	I/O	Description
51	CPUADR5	I	System control address
52	CPUADR4	I	System control address
53	CPUADR3	I	System control address
54	CPUADR2	I	System control address
55	CPUADR1	I	System control address
56	VSS	-	Connect to GND
57	CPUADR0	I	System control address
58	NCS	I	System control chip select
59	NWR	I	Writing system control
60	NRD	I	Reading system control
61	VDD	-	Power supply 3V
62	CPUDT7	I/O	System control data
63	CPUDT6	I/O	System control data
64	PVPPDRAM	O	Connect to VSS
65	PTESTDRAM	I	Connect to VSS
66	PVDDDRAM		Connect to VDD(2.7V)
67	PVSSDRAM		Connect to VSS
68	CPUDT5	I/O	System control data
69	CPUDT4	I/O	System control data
70	CPUDT3	I/O	System control data
71	VSS	-	Connect to GND
72	CPUDT2	I/O	System control data
73	CPUDT1	I/O	System control data
74	CPUDT0	I/O	System control data
75	CLKOUT1	O	Clock signal output (16.9/11.2/8.45MHz)
76	VDD	-	Power supply 3V
77	TEHLD	O	Mirror gate (Connect to TP141)
78	DTRD	O	Data frequency control switch (Connect to TP304)
79	IDGT	O	CAPA switch
80	BDO	I	RF Dropout/BCA data
81	CPDET2	I	Outer capacity detection
82	CPDET1	I	Inner capacity detection
83	VSS	-	Connect to GND
84	MMOD	I	Connect to VSS
85	NRST	I	System reset
86	VDD	-	Power supply 3V
87	CLKOUT2	O	Clock 16.9MHz
88	SBCK/PLLOK	O	Flame mark detection
89	IDOHOLD	O	ID gate for tracking holding
90	JMPINH	O	Jump prohibition
91	LG	O	Land/group switch
92	NTRON	I	Tracking ON
93	DACDATA	O	Serial data output (Connect to TP148)
94	DACLRCK	O	Identification signal of L and R (Connect to TP149)
95	DACCLK	I	Clock for serial data output
96	IPFLAG	I	Input of IP flag
97	BLKCK	I	Sub code/block/input clock
98	LRCK	I	Identification signal of L and R (Connect to VSS)
99	VSS	-	Connect to GND
100	OSCI1	I	Oscillation input terminal 16.9MHz

3.Pin function (3/3)

Pin No.	Symbol	I/O	Description
101	OSCO1	O	Oscillation output terminal 16.9MHz
102	VDD	-	Power supply 3V
103	PVSS	-	Connect to GND
104	PVDD	-	Power supply 3V
105	P1	I/O	Terminal master polarity switch input
106	P0	I/O	CIRC-RAM,OVER/UNDER Interruption
107	VSS	-	Connect to GND
108	SBCK	O	Clock output for sub code,serial input
109	SUBC	I	Sub code,serial input
110	NCLDCK	I	Sub code,flame clock input
111	CHCK40	I	Clock is read to DAT3~0 (Output of division frequency from ADSC)
112	DAT3	I	Data is read from disc (Going side by side output from ADSC)
113	DAT2	I	Data is read from disc (Going side by side output from ADSC)
114	DAT1	I	Data is read from disc (Going side by side output from ADSC)
115	DAT0	I	Data is read from disc (Going side by side output from ADSC)
116	VDD	-	Power supply 3V
117	SCLOCK	I/O	Debug serial clock (270 ohm pull up)
118	SDATA	I/O	Debug serial data (270 ohm pull up)
119	MONI3	O	Internal good title monitor (Connect to TP150)
120	MONI2	O	Internal good title monitor (Connect to TP151)
121	MONI1	O	Internal good title monitor (Connect to TP152)
122	MONI0	O	Internal good title monitor (Connect to TP153)
123	VSS	-	Connect to GND
124	NEJECT	I	Eject detection
125	VDD	-	Power supply 2.7V
126	NTRYCL	I	Non connect (Tray close detection)
127	NDASP	I/O	ATAPI drive active / slave connect I/O
128	NCS3FX	I	Non connect (ATAPI host chip select)
129	NCS1FX	I	Non connect (ATAPI host chip select)
130	VDD	-	Power supply 3V
131	DA2	I/O	ATAPI host address
132	DA0	I/O	Non connect (ATAPI host address)
133	NPDIAG	I/O	ATAPI Slave master diagnosis input
134	VSS	-	Connect to GND
135	DA1	I/O	Non connect (ATAPI host address)
136	NIOCS16	O	Output of selection of width of ATAPI host data bus
137	INTRQ	O	ATAPI Host interruption output
138	VDD	-	Power supply 3V
139	NDMACK	I	Non connect (ATAPI Host DMA characteristic)
140	IORDY	O	ATAPI Host ready output (Connect to TP157)
141	NIORD	I	Non connect (ATAPI host read)
142	VSS	-	Connect to GND
143	NIOWR	I/O	ATAPI Host write
144	DMARQ	O	ATAPI Host DMA request (Connect to TP159)

■ MN67706ZY (IC201) : Auto digital servo controller

1.Pin layout



2.Pin functions (1/3)

Pin No.	Symbol	I/O	Description
1	AS(AD2)	I	AS : Full adder signal(FEP)
2	TE(AD1)	I	Phase difference/3 beam tracking error(FEP)
3	FE(AD0)	I	Focus error(FEP)
4	AVDD	-	Apply 3.3V(For analog circuit)
5	FODRV(DA1)	O	Focus drive(DRVIC)
6	TRDRV(DA0)	O	Tracking drive(DRVIC)
7	AVSS	-	Ground(For analog circuit)
8	ARF	I	Equivalence RF+(FEP)
9	NARF	I	Equivalence RF-(FEP)
10	IREF1	I	Reference current1(For DBAL)
11	IREF2	I	Reference current2(For DBAL)
12	DSLF1	I/O	Connect to capacitor1 for DSL
13	DSLF2	I/O	Connect to capacitor2 for DSL
14	AVDD	-	Apply 3.3V(For analog circuit)
15	VHALF	I	Reference voltage 1.65+-0.1V(FEP)
16	PLPG	-	Not use(PLL phase gain setting resistor terminal)
17	PLFG	-	Not use(PLL frequency gain setting resistor terminal)
18	VREFH	I	Reference voltage 2.2V+-0.1V(FEP)
19	RVI	I/O	Connect to resistor for VREFH reference current source
20	AVSS	-	Ground(For analog circuit)
21	PLFLT1	O	Connect to capacitor1 for PLL
22	PLFLT2	O	Connect to capacitor2 for PLL
23	JITOUT	I/O	Output for jitter signal monitor
24	RFDIF	I	Not use
25	CSLFL1	I/O	Pull-up to VHALF

2.Pin function (2/3)

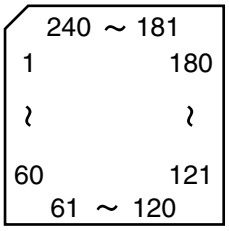
Pin No.	Symbol	I/O	Description
26	VFOSHORT	O	VFO short output
27	AVDD	-	Apply 3.3V(For analog circuit)
28	HPFIN	I	Pull-up to VHALF
29	HPFOUT	O	Connect to TP208
30	AVSS	-	Ground(For analog circuit)
31	LPFIN	I	Pull-up to VHALF
32	LPFOUT	O	Not use
33	CMPIN	I	Connect to TP210
34	TRCRS	I	Input signal for track cross formation
35	VCOF	I/O	JFVCO control voltage
36	DBALO	O	DSL balance adjust output
37	JLINE	O	J-line setting output(FEP)
38	AVDD	-	Apply 3.3V(For analog circuit)
39	LOUT	O	Connect to TP203 (Analog audio left output)
40	ROUT	O	Connect to TP204 (Analog audio right output)
41	AVSS	-	Ground(For analog circuit)
42	TGBAL	O	Tangential balance adjust(FEP)
43	TBAL	O	Tracking balance adjust(FEP)
44	FBAL	O	Focus balance adjust(FEP)
45	33VSS	-	Ground(For I/O)
46	33VDD	-	Apply 3.3V(For I/O)
47	OFTR	I	Off track signal
48	SYSCLK	I	16.9344MHz system clock input(ODC)
49	BDO	I	Drop out(FEP)
50	TSTSG	O	Calibration signal(FEP)
51	TRSDRV	O	Traverse drive(DRVIC)
52	SPDRV	O	Spindle drive output(DRVIC)
53	FG	I	FG signal input (Spindle motor driver)
54	TILTP	O	Connect to TP205
55	TILT	O	Connect to TP206
56	TILTN	O	Connect to TP207
57	25VSS	-	Ground(For internal core)
58	25VDD	-	Apply 2.5V(For internal core)
59	DTRD	I	Data read control signal(ODC)
60	IDGT/TEMUTE	I	Pull-down to Ground
61	LRCK/CPDET2	O	LR channel data strobe(ODC)/
62	BLKCK/CPDET1	O	CD sub code synchronous signal(ODC)/
63	SBCK/PLLOK	I	CD sub code data shift clock(ODC)/PLL pull-in OK signal input
64	IDHOLD	I	Pull-down to Ground
65	DACLRCK/JMPINH	I	1bit DAC-LR channel data strobe(ODC)/
66	DACDATA/LG	I	CD 1bit DAC channel data(ODC)
67	NTRON	O	L : Tracking ON(ODC)
68	DACCLK	O	1bit DAC channel data shift clock(ODC)
69	IPFLAG	O	CIRC error flag(ODC)
70	SUBC	O	CD sub code(ODC)
71	NCLDCK/JUMP	O	CD sub code data frame clock(ODC)/DVD JUMP signal(ODC)
72	MINTEST	I	Pull-down to Ground(For MINTEST)
73	TEST	I	Pull-down to Ground(For TEST)
74	33VSS	-	Ground(For I/O)
75	33VDD	-	Apply 3.3V(For I/O)
76	CHCK40	O	Clock for SRDATA(ODC)
77	DAT3	O	SRDATA3(ODC)
78	DAT2	O	SRDATA2(ODC)
79	DAT1	O	SRDATA1(ODC)
80	DAT0	O	SRDATA0(ODC)

2.Pin function (3/3)

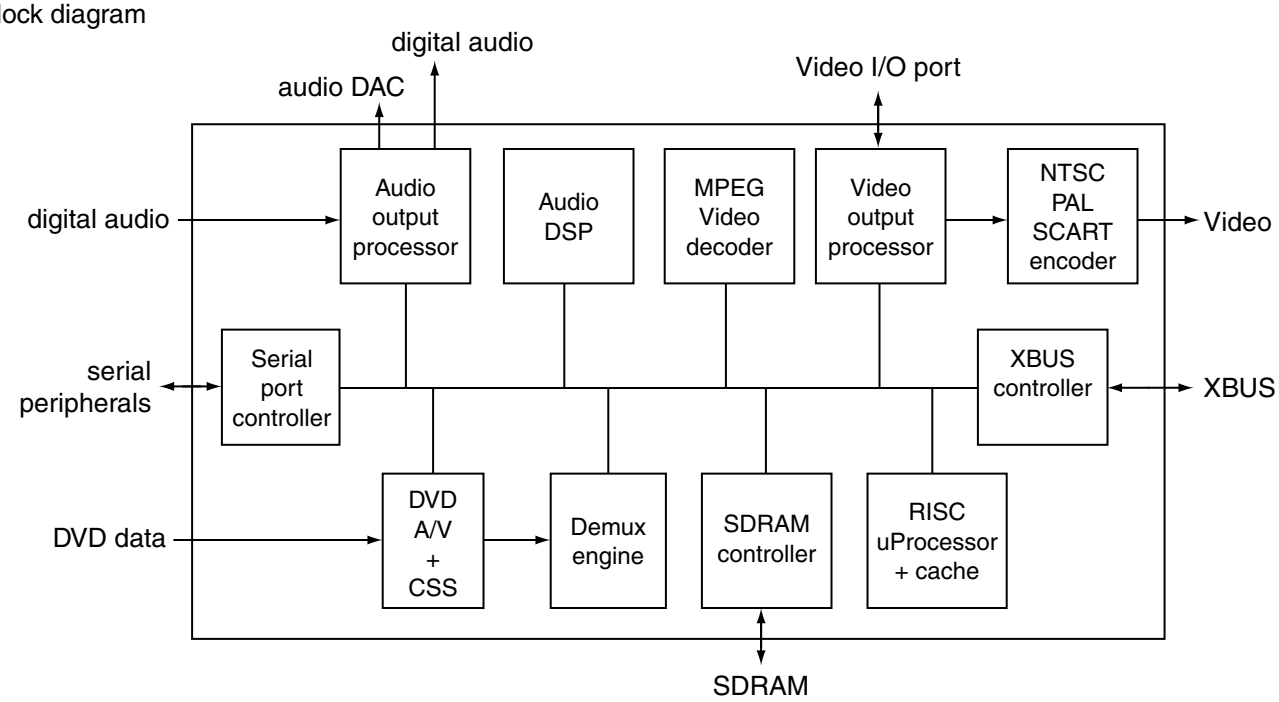
Pin No.	Symbol	I/O	Description
81	33VSS	-	Ground(For I/O)
82	33VDD	-	Apply 3.3V(For I/O)
83	TX	O	Digital audio interface
84	XRESET	I	Reset input (System control)
85	ENS	I	Servo DSC serial I/F chip select (System control)
86	ENC	I	CIRC serial I/F chip select (System control)
87	CPUIRQ	O	Interrupt request (System control)
88	CPUCLK	I	Serial I/F clock (System control)
89	CPUDTIN	I	Serial I/F data input (System control)
90	CPUDTOUT	O	Serial I/F data output (System control)
91	MONA	O	Connect to TP226 (Monitor terminal A)
92	MONB	O	Connect to TP225 (Monitor terminal A)
93	MONC	O	Connect to TP224 (Monitor terminal A)
94	NC	O	Connect to TP211
95	25VSS	-	Ground(For internal core)
96	25VDD	-	Apply 2.5V(For internal core)
97	LDCUR(AD6)	I	Laser current control terminal
98	TDOFS(AD5)	I	Connect to TP215
99	TG(AD4)	I	Tangential phase difference(FEP)
100	RFENV(AD3)	I	RF envelope input(FEP)

■ NDV8601VWA-BB(IC501):AV Decoder

1.Pin layout



2.Block diagram



3.Pin function (1/4)

Pin No.	Symbol	I/O	Description
1	VDDio	-	Power supply terminal 3.3V
2,3	MD10,11	I/O	SDRAM Data bus terminal
4	VDD	-	Power supply terminal 1.8V
5	MD12	I/O	SDRAM Data bus terminal
6	VSSio	-	Connect to ground
7~9	MD13~15	I/O	SDRAM Data bus terminal
10	VDDio	-	Power supply terminal 3.3V
11	DQM1	O	SDRAM Data byte enable
12,13	MA9,8	O	SDRAM Address bus terminal
14	VSSio	-	Connect to ground
15,16	MA7,6	O	SDRAM Address bus terminal
17	VSS	-	Connect to ground
18	MA5	O	SDRAM Address bus terminal
19	VDDio	-	Power supply terminal 3.3V
20,21	MA4,3	O	SDRAM Address bus terminal
22	MCLK	O	SDRAM Clock output
23	VSSio	-	Connect to ground
24	CKE	O	SDRAM Clock enable output
25,26	MA2,1	O	SDRAM Address bus terminal
27	VDDio	-	Power supply terminal 3.3V
28	MA0	O	SDRAM Address bus terminal
29	MA10	O	SDRAM Address bus terminal

3.Pin function (NDV8601VWA-BB 2/4)

Pin No.	Symbol	I/O	Description
30	MA11	-	Non connect
31	VSSio	-	Connect to ground
32,33	MA12,13	O	SDRAM Address bus, reserved for terminal compatibility with 64Mb SDRAM
34	VDD	-	Power supply terminal 1.8V
35	CS0	O	SDRAM Primary bank chip select
36	VDDio	-	Power supply terminal 3.3V
37	RAS	O	SDRAM Command bit
38	CAS	O	SDRAM Command bit
39	WE	O	SDRAM Command bit
40	VSSio	-	Connect to ground
41	DQM0	O	SDRAM Data byte enable
42	DQM2	O	SDRAM Data byte enable
43	MD16	I/O	SDRAM Data bus terminal
44	VDDio	-	Power supply terminal 3.3V
45,46	MD17,18	I/O	SDRAM Data bus terminal
47	VSS	-	Connect to ground
48	MD19	I/O	SDRAM Data bus terminal
49	VSSio	-	Connect to ground
50~52	MD20~22	I/O	SDRAM Data bus terminal
53	VDDio	-	Power supply terminal 3.3V
54~56	MD23~25	I/O	SDRAM Data bus terminal
57	VSSio	-	Connect to ground
58~61	MD26~29	I/O	SDRAM Data bus terminal
62	VDDio	-	Power supply terminal 3.3V
63,64	MD30,31	I/O	SDRAM Data bus terminal
65	DQM3	O	SDRAM Data byte enable
66	CS1	O	SDRAM Extension bank chip select
67	VSSD	-	Connect to ground
68	SPDIF	O	S/PDIF Digital audio output terminal
69	VSSio	-	Connect to ground
70	AIN	I	Digital audio input for digital micro; can be used as GPIO
71	AOUT3	O	Serial audio output data to audio DAC for left and right channels for down-mix
72	AOUT2	O	Serial audio output data to audio DAC for surround left and right channels
73	AOUT1	O	Serial audio output data to audio DAC for center and LFE channels
74	AOUT0	O	Serial audio output data to audio DAC for left and right channels
75	VDDio	-	Power supply terminal 3.3V
76	PCMCLK	O	Audio DAC PCM sampling clock frequency, common clock for DACs and ADC
77	VDD	-	Power supply terminal 1.8V
78	ACLK	O	Audio interface serial data clock, common clock for DACs and AD converter
79	LRCLK	O	Left / right channel clock, common clock for DACs and ADC
80	SRST	O	Active low RESET signal for peripheral reset
81	RSTP	I	RESET_Power : from system, used to reset frequency synthesizer and rest of chip
82	VSSio	-	Connect to ground
83	RXD1	I	UART1 Serial data input from external serial device, used for IR receiver
84	SSPIN1	I/O	SSP1 Data in or 16X clock for USART function in UART1
85	VSS	-	Connect to ground
86	SSPOUT1	I/O	SSP1 Data out or UART1 data-terminal-ready signal
87	SSPCLK1	I/O	SSP1 Clock or UART1 clear-to -send signal
88	SSPCLK0	I/O	SSP0 Clock or request-to-send function in UART1
89	VDD	-	Power supply terminal 1.8V
90	SSPIN0	I/O	SSP0 Data in or 16X clock for USART function in UART0

3.Pin function (NDV8601VWA-BB 3/4)

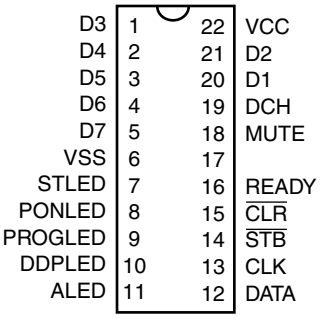
Pin No.	Symbol	I/O	Description
91	VDDio	-	Power supply terminal 3.3V
92	SSPOUT0	I/O	SSP0 Data out or UART0 data-terminal-ready signal
93	TXD0	I/O	UART0 Serial data output to an external serial device
94	RXD0	I	UART0 Serial data input from external serial device
95	CTS0	I/O	UART0 Clear-to-send signal
96	RTS0	I/O	UART0 Request-to-send signal
97	VSSio	-	Connect to ground
98	CXI	I	Crystal input terminal for on-chip oscillator or system input clock
99	CXO	O	Crystal output terminal for on-chip oscillator
100	OSCVSS	-	Connect to ground for oscillator
101	OSCVDD	-	Power supply terminal for oscillator 1.8V
102	MVCKVDD	-	Power supply terminal for main and video clock PLL 3.3V
103	SCEN	I	Scan chain test enable
104	MVCKVSS	-	Connect to ground for main and video clock PLL
105	ACLKVSS	-	Connect to ground for audio clock PLL
106	SCMD	I	Scan chain test mode
107	ACLKVDD	-	Power supply terminal for audio clock PLL 3.3V
108	VDDDAK	-	Power supply terminal for DAC digital 1.8V
109	VSSDAC	-	Connect to ground for DAC digital
110	Cr/R	O	Video signal output (Cr output : composite/component Red output)
111	IOM	O	Cascaded DAC differential output used to dump current into external resistor for power
112	C/Cb/B	O	Video signal output (Chrominance output for NTSC/PAL S-Video Cb output for component Blue output)
113	VAA3	-	Power supply terminal for DAC analog 3.3V
114	Y/G	O	Video signal output (Luminance for S-Video and component Green output)
115	VSSA	-	Connect to ground for DAC analog
116	VREF	-	Non connect
117	VAA	-	
118	CVBS/C	O	Video signal output (Composite video Chrominance output for S-Video)
119	RSET	O	Current setting resistor of output DACs
120	COMP	O	Compensation capacitor connection
121	VSS	-	Connect to ground
122	VCLK	-	Non connect
123	VSYNC	-	Non connect
124	HSYNC	-	Non connect
125	VDDio	-	Power supply terminal 3.3V
126~131	VI07~02	-	Non connect
132	VSSio	-	Connect to ground
133,134	VI01,00	-	Non connect
135	VDD	-	Power supply terminal 1.8V
136~139	AD31~28	I/O	Multiplexed address / data bus terminal
140	VDDio	-	Power supply terminal
141~144	AD27~24	I/O	Multiplexed address / data bus terminal
145	PWE3	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
146	AD23	I/O	Multiplexed address / data bus terminal
147	VSSio	-	Connect to ground
148~153	AD22~17	I/O	Multiplexed address / data bus terminal
154	VDDio	-	Power supply terminal 3.3V
155	AD16	I/O	Multiplexed address / data bus terminal
156	PWE2	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
157,158	AD15,14	I/O	Multiplexed address / data bus terminal
159	VDD	-	Power supply terminal 1.8V

3.Pin function (NDV8601VWA-BB 4/4)

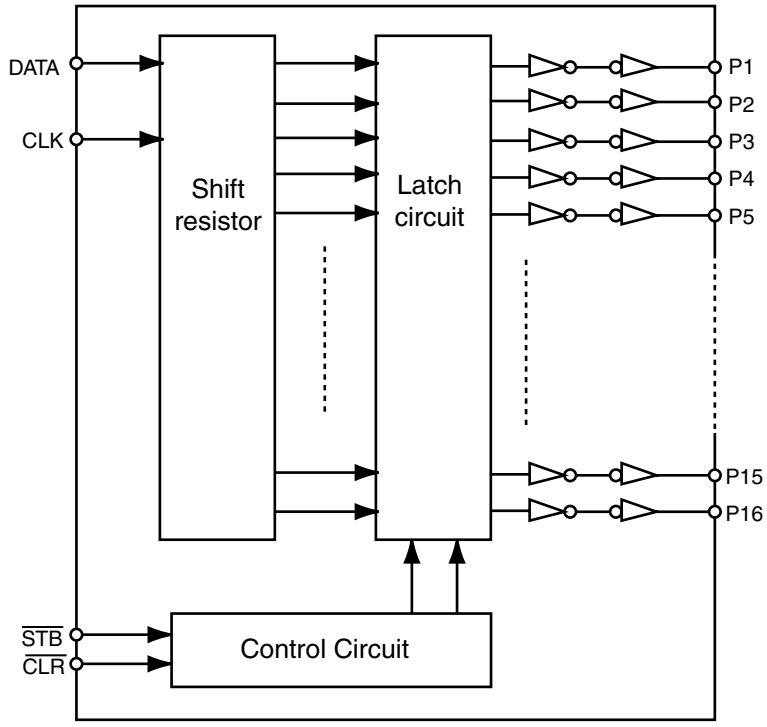
Pin No.	Symbol	I/O	Description
160	SCLK	O	External bus clock used for programmable host peripherals
161	ACK	I/O	Programmable WAIT/ACK/RDY control
162	VSSio	-	Connect to ground
163~168	AD13~8	I/O	Multiplexed address / data bus terminal
169	VDDio	-	Power supply terminal 3.3V
170	PWE1	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
171	VSS	-	Connect to ground
172~176	AD7~3	I/O	Multiplexed address / data bus terminal
177	VSSio	-	Connect to ground
178~180	AD2~0	I/O	Multiplexed address / data bus terminal
181	VDDio	-	Power supply terminal 3.3V
182	PWE0	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
183	ALE	I/O	Address latch enable
184~187	LA0~3	I/O	Latched address 0~3
188	VSSio	-	Connect to ground
189	RD	I/O	Read terminal
190	LHLDA	O	Bus hold acknowledge in slave mode
191	LHLD	I	Bus hold request from external master in slave mode
192	VDD	-	Power supply terminal 1.8V
193	PCS0	O	Peripheral chip select 0, generally used for enabling the program store ROM/FLASH
194,195	XI01,02	I/O	Programmable general purpose external input/output
196	VDDio	-	Power supply terminal 3.3V
197~200	XI03~06	I/O	Programmable general purpose external input/output
201	VSS	-	Connect to ground
202,203	XI07,08	I/O	Programmable general purpose external input/output
204	VSSio	-	Connect to ground
205	XI09	I/O	Programmable general purpose external input/output
206~209	XID10~13	I/O	Programmable general purpose external input/output
210	VDDio	-	Power supply terminal 3.3V
211	XID14	I/O	Programmable general purpose external input/output
212	VDD	-	Power supply terminal 1.8V
213	DSYNC	I	DVD Parallel mode sector sync
214	DREQ	O	DVD Parallel mode data request
215	DCLK	I	Data sampling clock
216	DSTB	I	Parallel mode data valid, serial mode left/right clock
217	DVD0	I	DVD Drive parallel data port
218	VSSio	-	Connect to ground
219~223	DVD1~5	I	DVD Drive parallel data port
224	VDDio	-	Power supply terminal 3.3V
225,226	DVD6,7	I	DVD Drive parallel data port
227	MD0	I/O	SDRAM Data bus terminal
228	VSSio	-	Connect to ground
229	MD1	I/O	SDRAM Data bus terminal
230	VSS	-	Connect to ground
231,232	MD2,3	I/O	SDRAM Data bus terminal
233	VDDio	-	Power supply terminal 3.3V
234~236	MD4~6	I/O	SDRAM Data bus terminal
237	VSSio	-	Connect to ground
238~240	MD7~9	I/O	SDRAM Data bus terminal

■ NJU3715G-W(IC802) : L.E.D.Driver

1.Pin layout



2.Block diagram

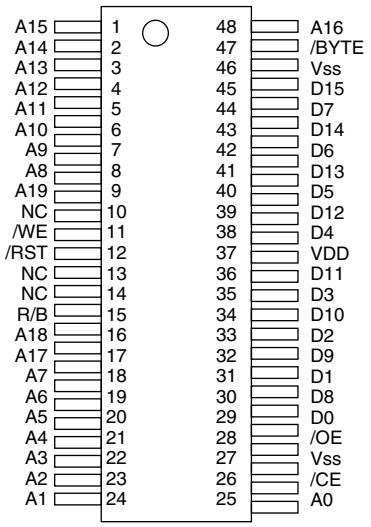


3.Pin function

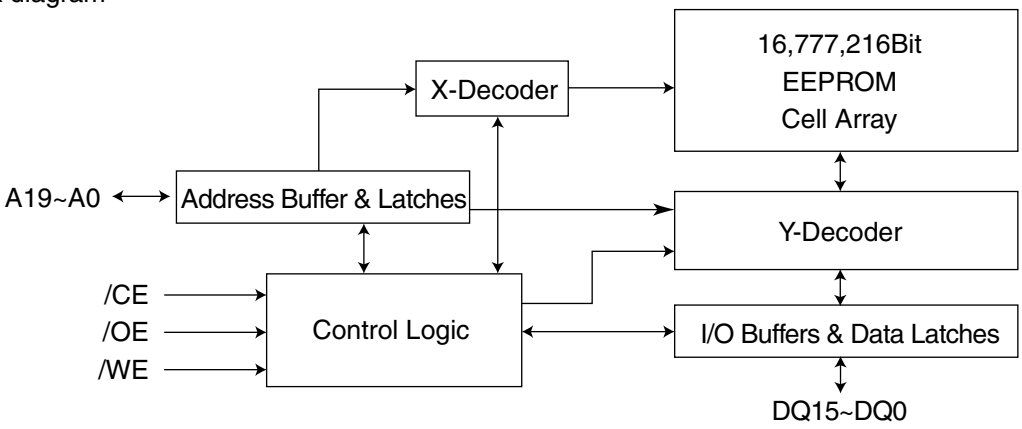
PIN No.	I/O	Symbol	Function
1~5	O	D3~D7	Parallel conversion data output terminal.
6	-	VSS	Connect to GND.
7~11	O	STLED,PONLED,PROGLED DDPLED,ALED	Parallel conversion data output terminal.
12	I	DATA	Serial data input terminal.
13	I	CLK	Clock signal input terminal.
14	I	$\overline{ST}$	Strobe signal input terminal.
15	I	$\overline{CLR}$	Clear signal input terminal.
16	I	READY	Ready signal input.
17	-		Non connect.
18	I	MUTE	Muting signal input.
19~21	O	DCH,D1,D2	Parallel conversion data output terminal.
22	-	VCC	Power supply terminal.

■ SST39VF160-7CEK (IC509) : 16M EEPROM

1. Pin layout



2. Block diagram

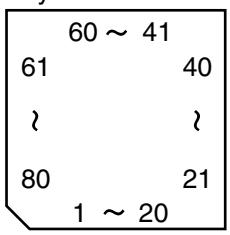


3. Pin function

Symbol	Pin name	Function
A19~A0	Address Inputs	To provide memory addresses. During sector erase A19~A11 address lines will select the sector. During block erase A19~A15 address lines will select the block.
DQ15~DQ0	Data Input/Output	To output data during read cycles and receive input data during write cycles. Data is internally latched during a write cycle. The outputs are in tri-state when /OE or /CE is high.
/CE	Chip Enable	To activate the device when /CE is low.
/OE	Output Enable	To gate the data output buffers.
/WE	Write Enable	To control the write operations.
VDD	Power Supply	To provide 3-volt supply (2.7V-3.6V).
Vss	Ground	
NC	No Connection	

■ UPD780232GC-050(IC801):System controller

1.Pin layout



2.Pin function

Pin No.	Symbol	I/O	Description
1	VDD1	-	Power supply terminal (+5V)
2	VSS1	-	Connect to ground
3,4	X1,X2	I/O	Main system clock oscillation terminal
5	IC(VPP)	-	Internal connection (connect to VSS1)
6	RESET	I	System reset input
7	SSPCLK1B	I	Serial communications clock input
8	SSPOUT1B	I	Serial communications data input
9	SSPIN1A	O	Serial communications data output
10	POWERSW	I	Power switch (S1) input terminal
11	AVCO	O	AV Compulink output terminal
12	INTP	O	Serial communications interrupt output
13	P.ON	O	Power ON signal output
14	CPU RESET	O	CPU Reset output
15	AVCI	I	AV Compulink input terminal
16	FLCS	I	Chip select input
17	REMO	I	Remote controller signal input
18	AVSS	-	Connect to ground for A/D converter
19	KEY3	I	Operation switch (S801~S808) input terminal
20	KEY2	I	Operation switch (S809,S810,S812~S15) input terminal
21	CAMSW	I	Cam switch position detection terminal (S84)
22	MUDSW	I	Traverse mechanism UP/DOWN switch detection terminal (S82)
23	VSS0	-	Connect to ground for port section
24	AVDD	-	Power supply terminal (+5V)
25	VDD0	-	Power supply terminal (+5V) for port section
26	DATA	O	Data output for LED controller (IC802)
27	CLK	O	Clock output for LED controller (IC802)
28	STB	O	Data latch output for LED controller (IC802)
29		O	Connect to TP503
30	RR	O	Sub tray right rotation driving signal
31	LR	O	Sub tray left rotation driving signal
32	LDOWN	O	Traverse mechanism down driving signal
33	LUP	O	Traverse mechanism up driving signal
34	T.IN	I	Tray close detection terminal (S83)
35	T.OUT	I	Tray open detection terminal (S83)
36	FXIN	I	Exchange switch detection terminal
37	PD	I	Play position photo coupler input
38	NDD	I	Disc detection photo coupler input
39~58	P24~P5	O	FL Segment control signal output
59	VDD2	-	Power supply terminal (+5V) for driver section
60	VLOAD	-	Connected to pull down resistor for FL driver
61~64	P4~P1	O	FL Segment control signal output
65~67		-	Connect to TP504~506
68~80	13G~1G	O	FL Grid control signal output

Glossary of term and abbreviations (for AV Decoder section)

3D	3-dimension
A/V	1)audio/video 2)audio/visual
ac	alternating current
ACLK	audio serial-data (bit) clock
AD	multiplexed address / data bus
ADC	analog-to-digital converter
AIN	digital audio input
ALE	address latch enable
ANSI/SMPTE	American National Standards Institute / Society of Motion Pictures and Television Engineers
AOP	Audio Output Processor
AXCLK	test-mode audio-PLL clock output
baud	unit of signaling speed equal to one code element per second
Cb	blue color difference component (in accordance with the CCIR 601 specifications)
CCIR	Consultative Committee on International Radio
CD	compact disc
CD-DA	compact disc-digital audio
CMOS	Complementary Metal Oxide Semiconductor
CPU	Central Processing Unit
Cr	red color difference component (in accordance with the CCIR 601 specifications)
CSS	Content Scrambling System
CTS	Clear To Send
CVBS	Composite Video Blank and Sync
DAC	Digital-to-Analog Converter
dc	direct current
DEMUX	DEMUX Engine
DSP	Digital Signal Processing
DTS	Digital Theater System
DVD	Digital Versatile Disc
EAV	End Active Video
EAV/SAV	End Active Video / Start Active Video
EEI	Enable Error Interrupt
EEPROM	Electrically Erasable Programmable Read-Only Memory
FS	FIFO Status
GPIO	General Purpose Input/Output
HDCD	High Definition Compatible Digital
HDTV	High-Definition television
HSYNC	Horizontal sync
I/O	Input/Output
IEC	International Electrotechnical Commission
IOM	Current (I) Output Minus (complementary shared current path to Video DAC current paths)
IR	infrared
ITU	International Telecommunications Union
LA	Latched Address Bus
LCLK	oscillator clock (derived from internal crystal oscillator)
Lfe	Low-frequency effect
LRCLK	Left/Right clock
LSB	Least Significant Bit
Mb	Megabit
MB	Megabyte

MCLK	primary or master clock
MHz	Megahertz
MIPS	Million Instructions Per Second
MmCPU	Mediamatics CPU (synonym for internal RISC CPU)
MP3	Moving Picture Experts Group Layer-3 Audio (audio file format / extension)
MPEG1 audio	A digital audio format mainly used in video CDs. It is based on the moving picture expert group (MPEG1) format, a data compression technology.
MPEG2 audio	A digital audio format mainly used in Europe and Australia. It provides high quality, multi-channel audio of up to eight channels in the same was as Dolby Digital and DTS. It is based on the MPEG2 format, a data compression technology more improved than MPEG1
NOP	No Operation
NTSC	1)National Television System Committee 2)Worldwide video standard in North America and Japan
NTSC-M	Version of NTSC used in certain parts of the world (Brazil)
OSD	On-screen display
PAL	Phase alteration by line
PCM	Pulse Code Modulation
PCMCLK	PCM audio-data over-sampling clock
PCS	1)Picture Control and Size 2)Perpheral Chip Select
PLL	Phase Lock Loop
PQFP	Plastic Quad Flat Pack (Package)
PWM	Pulse Width Modulator
r/w	Read/Write access
RAM	Random Access Memory
RGB	Red-Green-Blue (color model)
RISC	Reduced Instruction Set Computer
ROM	Read-Only Memory
RXD	Receive signal
RW	Readable / Write able
SAV	Start Active Video
SCART	Syndicat des Constructeurs d'Appareils Radiorecepteurs et Televiseurs (connector used in Europe to connect many kinds of audiovisual equipment)
SCLK	Secondary or slave clock
SDRAM	Synchronous Dynamic Random Access Memory
S/PDIF	Sony / Philips Digital Interface
S/PDIFCLK	clock associated with the S/PDIF output
SRAM	Static Random Access Memory
SSP	Synchronous Serial Port
TXD	transmit signal
UART	Universal Asynchronous Receiver-transmitter
USART	Universal Synchronous / Asynchronous Receiver / Transmitter
VGA	Video Graphics Array
VIO	Video Input / Output
VREF	Voltage REFerence
Vref	Vertical reference
VSSA	quiet analog ground
VSYNC	Vertical sync
XBUS	External peripheral bus
XIO	External Input / Output
Y	Luminance component (in accordance with the CCIR 601 specifications)
YCbCr	Luminance component, blue color difference component, red color difference component (in accordance with the CCIR 601 specifications)

JVC

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No.A0017

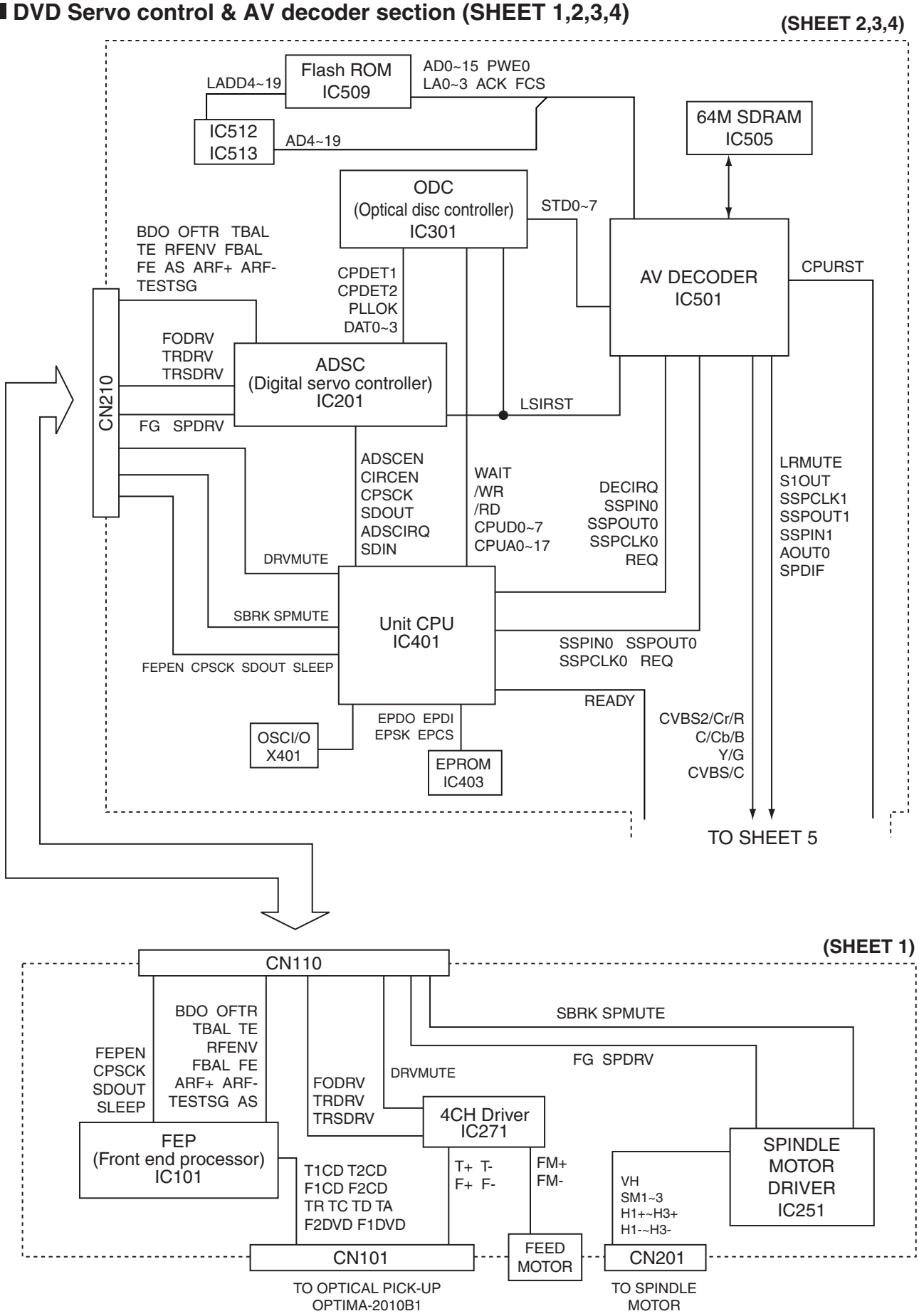
Printed in Japan
200109(O)

Safety precaution

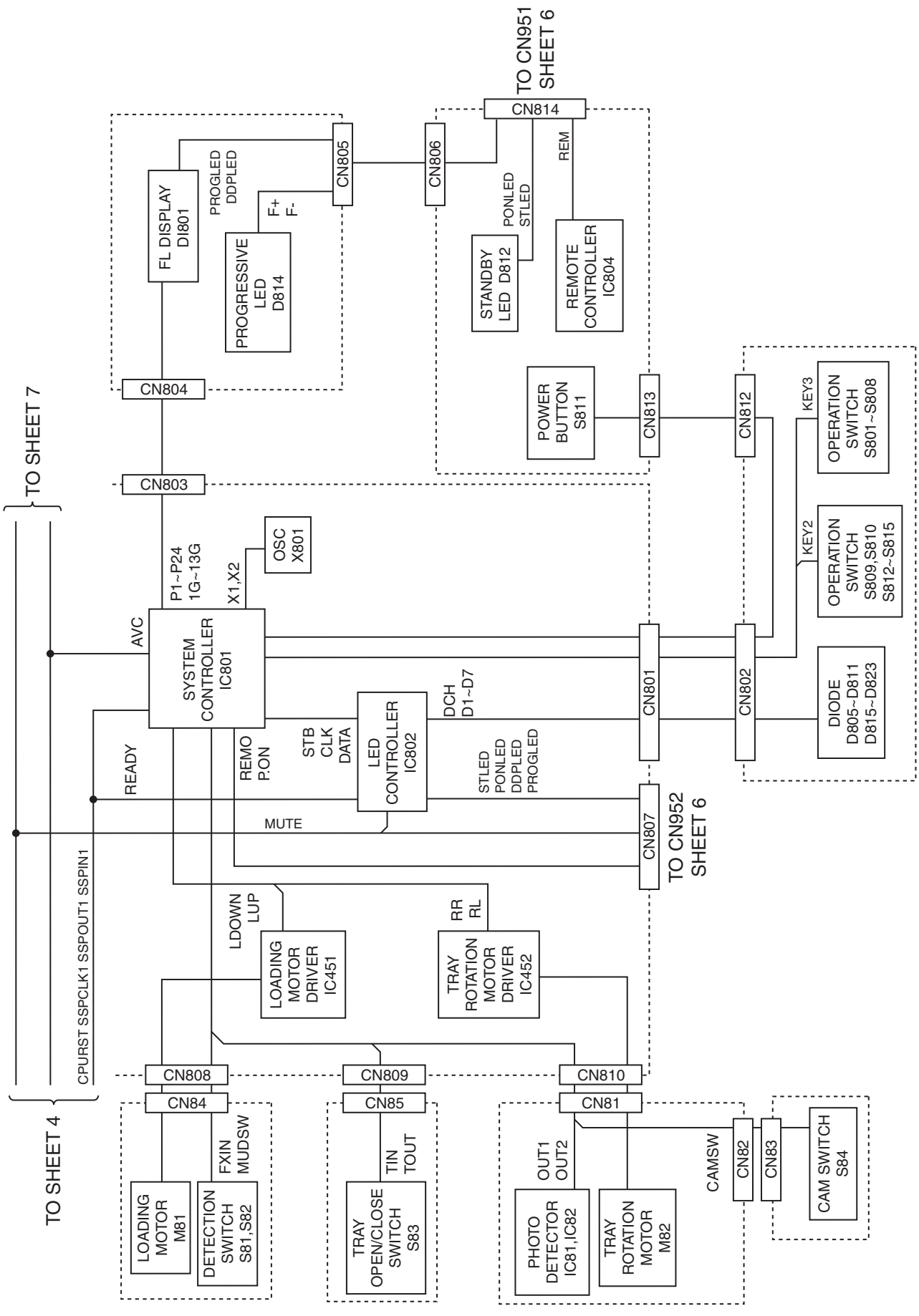
In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.
When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the JC version)

Block diagrams

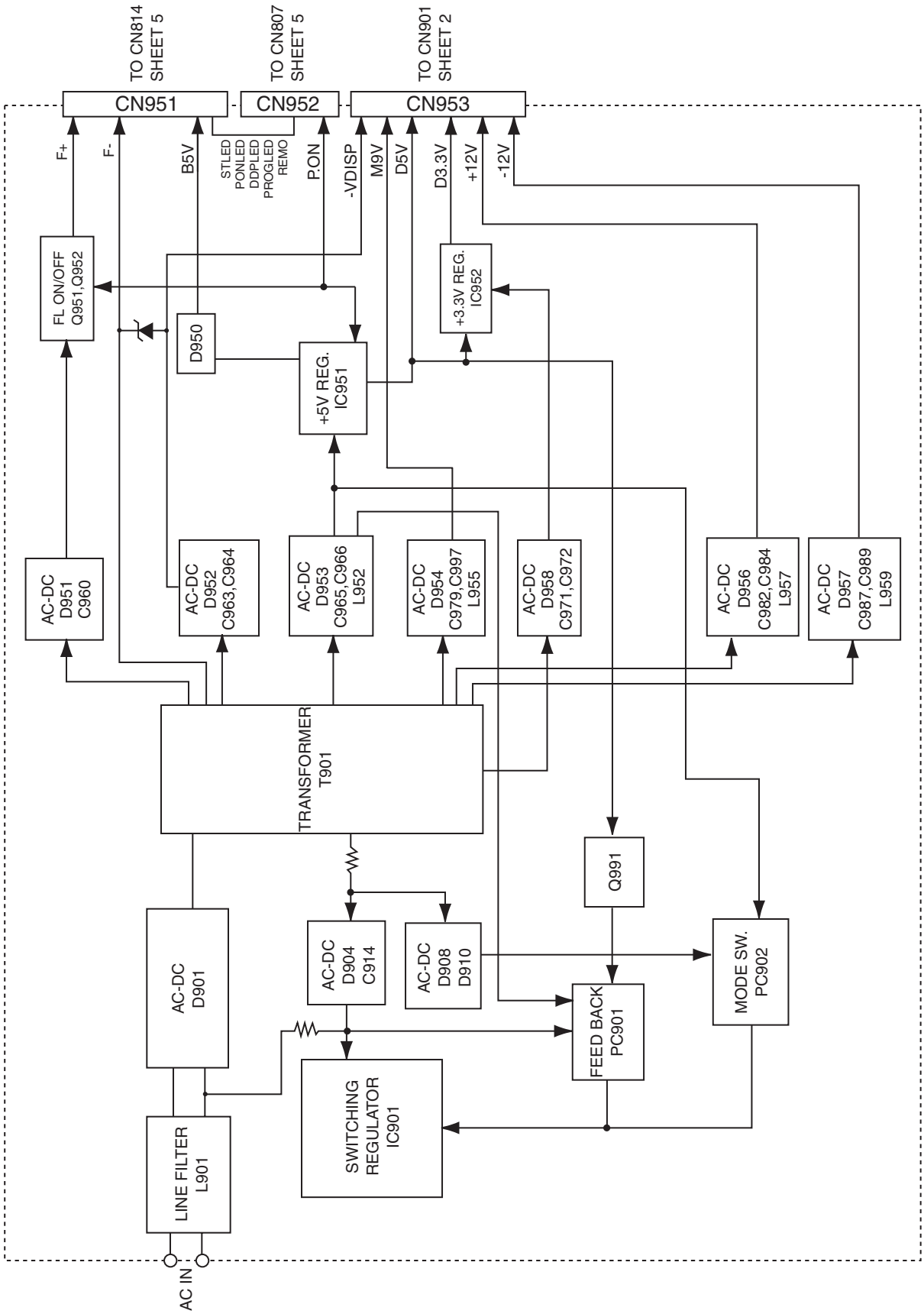
■ DVD Servo control & AV decoder section (SHEET 1,2,3,4)



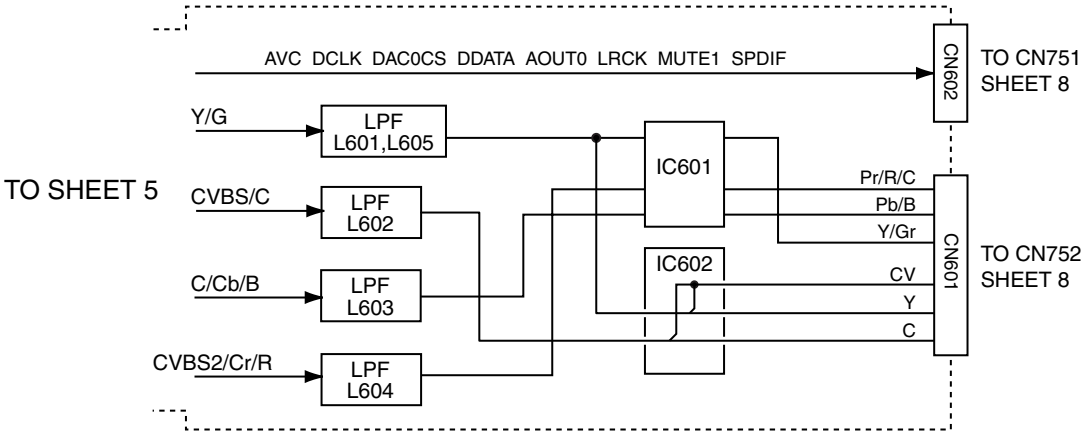
■ FL Display & system control section (SHEET 5)



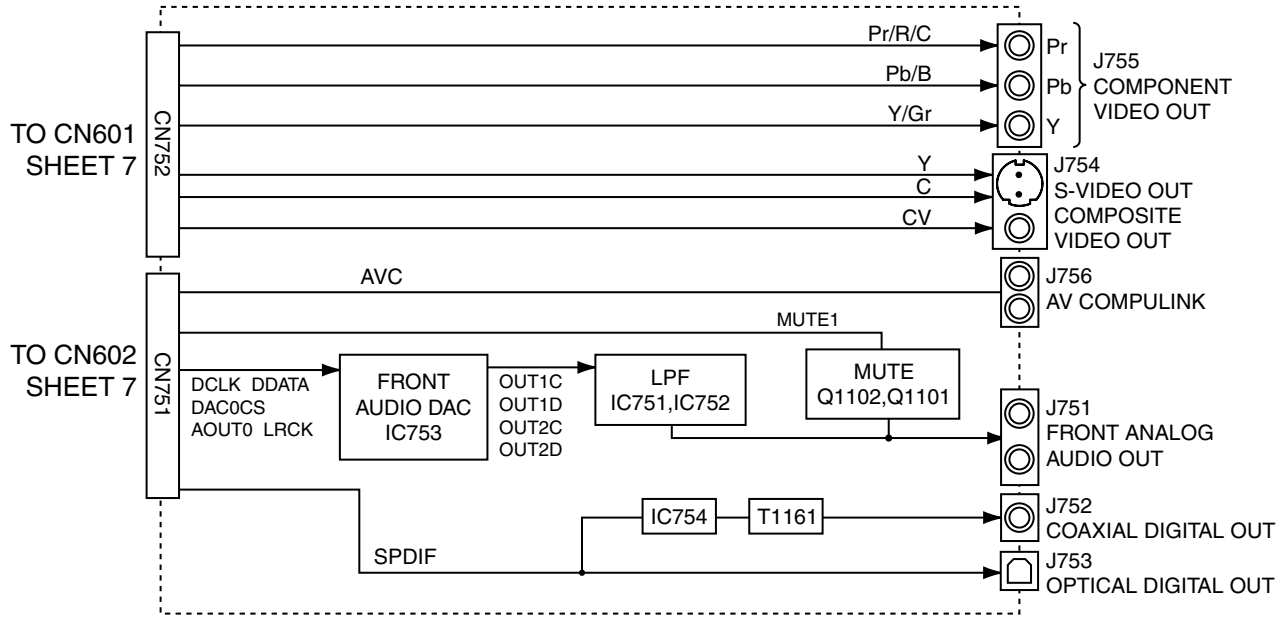
■ Power supply section (SHEET 6)



■ Video signal driver section (SHEET 7)



■ AUDIO/VIDEO Signal output section (SHEET 8)



Standard schematic diagrams

■ Frontend & motor driver section

LEA10024A

TO Pick up unit

CN101 QGF1012F1-30K

IC101 AN8702FH FRONT END PROSSESOR

IC271 BA5985FM-X DRIVER

IC251 BA6964FM-X SP MOTOR DRIVER

IC102 MM3325N-X

FEED MOTOR GAR0127-001

S101 QSW0620-001

CN201 QGF1016F2-11W

to SP. MOTOR

CN110 QGF0501F4-46X

TO CN210
SHEET 2

Digital data signal

MODEL XV-F80

SHEET 1/8

■ Servo control section

TO CN953
SHEET 6

TO CN110
SHEET 1

TO SHEET 3

	J/S-SI	S/SI/SI SW-SI	CC	DD	KSS
	2CH	2CH	2CH	2CH	2CH
R421	X	0	0	X	
R422	0	X	0	X	0
R423	0	0	X	0	X
R424	0	0	0	0	X
R425	X	X	X	X	X
R426	X	X	X	X	X
R427	X	X	X	X	X
R428	X	X	X	X	X

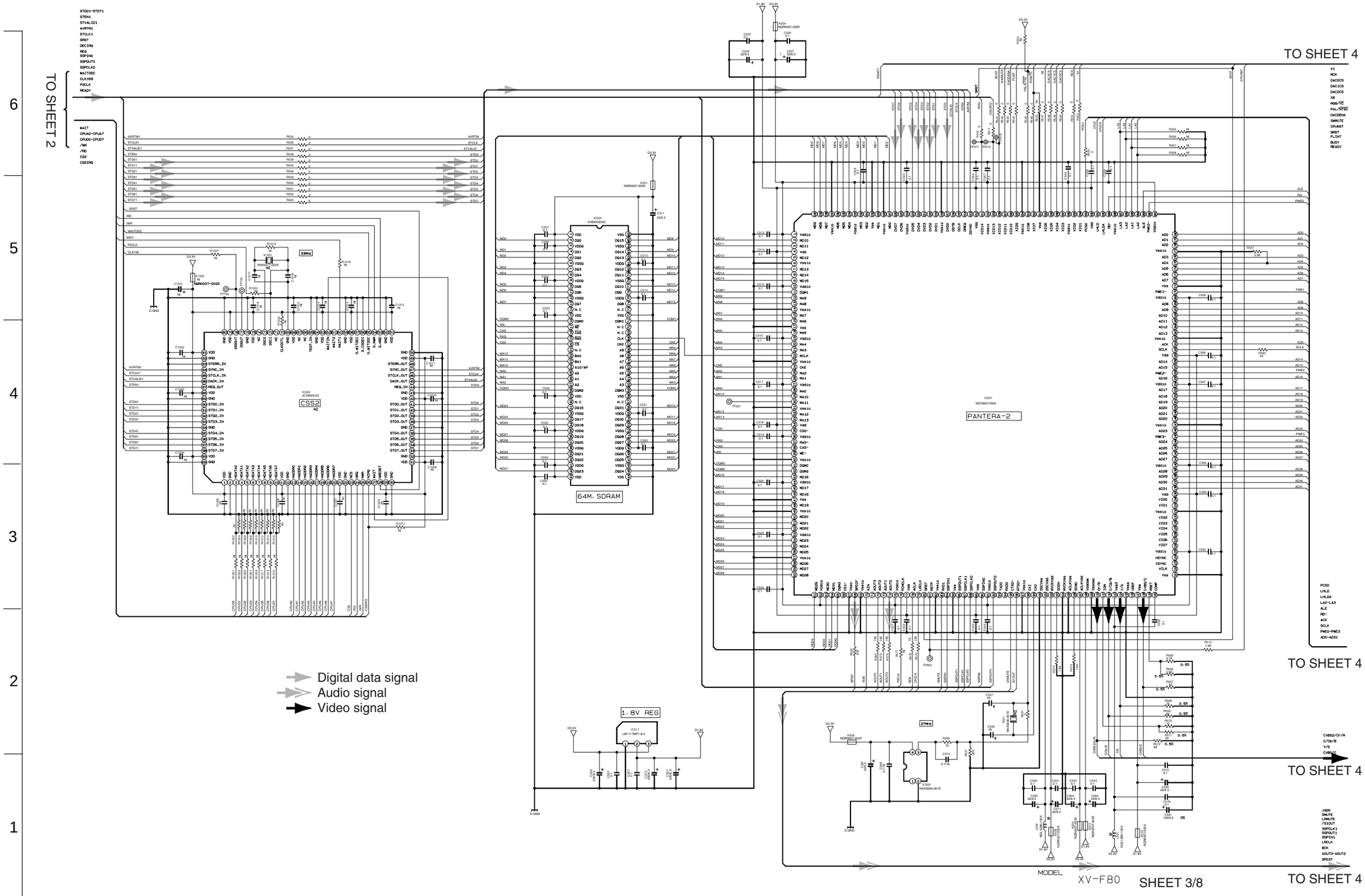
	SJ-UI	SJ-LE	LT	LE	4J
	2CH	2CH	2CH	2CH	2CH
R421	X	0	X	0	X
R422	0	X	X	0	0
R423	X	X	X	0	0
R424	0	0	X	X	X
R425	X	X	X	X	X
R426	X	X	X	X	X
R427	X	X	X	X	X
R428	X	X	X	X	X

	LY	▲	LF		
	2CH	2CH	2CH		
R421	0	X	0		
R422	X	X	0		
R423	0	0	X		
R424	X	X	X		
R425	X	X	X		
R426	X	X	X		
R427	X	X	X		
R428	X	X	X		

Digital data signal

MODEL XV-F80 SHEET 2/8

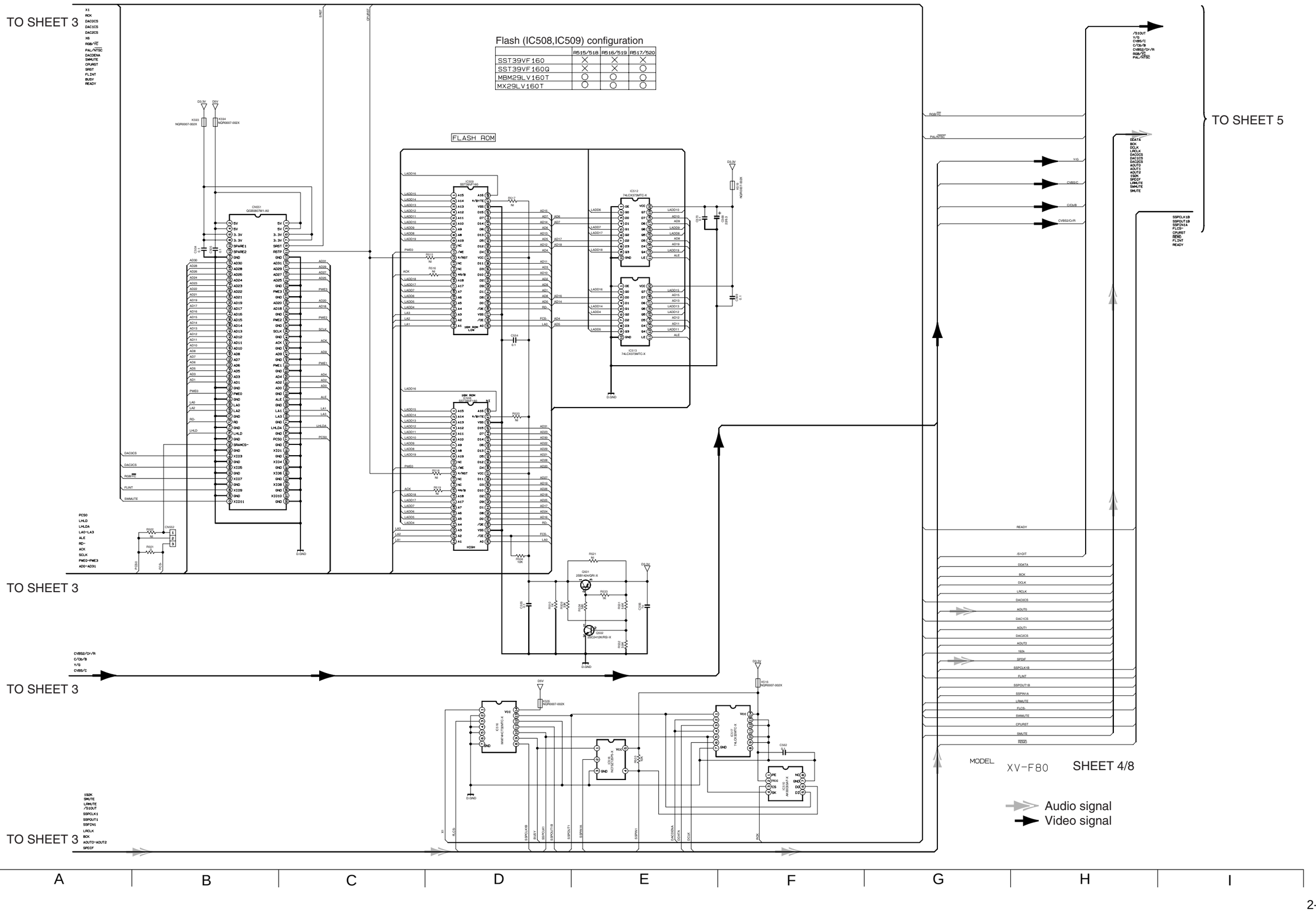
■ AV Decoder section



■ Flash ROM section

Flash (IC508,IC509) configuration

	R515/518	R516/519	R517/520
SST39VF160	×	×	×
SST39VF160Q	×	×	○
MBM29LV160T	○	○	○
MX29LV160T	○	○	○



■ FL Display & system control section

TO SHEET 4

TO SHEET 7

TO CN952 SHEET 6

TO CN951 SHEET 6

LEA10030-A1 LOADING MECHA U/D CN84 M81 RF-500TB-12560 SW1 EXCHANGE SW2 MECHA UP/DOWN SW3 TRAY OPEN/CLOSE CN85 SW4 LEA10030-A2 CN808 CN809 CN810 CN81 M82 DISC TABLE MOTOR CN82 LEA10030-A3 CN83 LEA10037-A1 CN841 CN842 LEA10028-A3 CN806 CN814 CN812 CN813 LEA10029-A2 CN803 CN804 FL DISPLAY CN805 DVD AUDIO LEA10029-A3 CN801 CN802 LEA10029-A1 IC801 SYSCOM IC803 IC802 IC451 IC452 IC453 IC454 IC455 IC456 IC457 IC458 IC459 IC460 IC461 IC462 IC463 IC464 IC465 IC466 IC467 IC468 IC469 IC470 IC471 IC472 IC473 IC474 IC475 IC476 IC477 IC478 IC479 IC480 IC481 IC482 IC483 IC484 IC485 IC486 IC487 IC488 IC489 IC490 IC491 IC492 IC493 IC494 IC495 IC496 IC497 IC498 IC499 IC500 IC501 IC502 IC503 IC504 IC505 IC506 IC507 IC508 IC509 IC510 IC511 IC512 IC513 IC514 IC515 IC516 IC517 IC518 IC519 IC520 IC521 IC522 IC523 IC524 IC525 IC526 IC527 IC528 IC529 IC530 IC531 IC532 IC533 IC534 IC535 IC536 IC537 IC538 IC539 IC540 IC541 IC542 IC543 IC544 IC545 IC546 IC547 IC548 IC549 IC550 IC551 IC552 IC553 IC554 IC555 IC556 IC557 IC558 IC559 IC560 IC561 IC562 IC563 IC564 IC565 IC566 IC567 IC568 IC569 IC570 IC571 IC572 IC573 IC574 IC575 IC576 IC577 IC578 IC579 IC580 IC581 IC582 IC583 IC584 IC585 IC586 IC587 IC588 IC589 IC590 IC591 IC592 IC593 IC594 IC595 IC596 IC597 IC598 IC599 IC600 IC601 IC602 IC603 IC604 IC605 IC606 IC607 IC608 IC609 IC610 IC611 IC612 IC613 IC614 IC615 IC616 IC617 IC618 IC619 IC620 IC621 IC622 IC623 IC624 IC625 IC626 IC627 IC628 IC629 IC630 IC631 IC632 IC633 IC634 IC635 IC636 IC637 IC638 IC639 IC640 IC641 IC642 IC643 IC644 IC645 IC646 IC647 IC648 IC649 IC650 IC651 IC652 IC653 IC654 IC655 IC656 IC657 IC658 IC659 IC660 IC661 IC662 IC663 IC664 IC665 IC666 IC667 IC668 IC669 IC670 IC671 IC672 IC673 IC674 IC675 IC676 IC677 IC678 IC679 IC680 IC681 IC682 IC683 IC684 IC685 IC686 IC687 IC688 IC689 IC690 IC691 IC692 IC693 IC694 IC695 IC696 IC697 IC698 IC699 IC700 IC701 IC702 IC703 IC704 IC705 IC706 IC707 IC708 IC709 IC710 IC711 IC712 IC713 IC714 IC715 IC716 IC717 IC718 IC719 IC720 IC721 IC722 IC723 IC724 IC725 IC726 IC727 IC728 IC729 IC730 IC731 IC732 IC733 IC734 IC735 IC736 IC737 IC738 IC739 IC740 IC741 IC742 IC743 IC744 IC745 IC746 IC747 IC748 IC749 IC750 IC751 IC752 IC753 IC754 IC755 IC756 IC757 IC758 IC759 IC760 IC761 IC762 IC763 IC764 IC765 IC766 IC767 IC768 IC769 IC770 IC771 IC772 IC773 IC774 IC775 IC776 IC777 IC778 IC779 IC780 IC781 IC782 IC783 IC784 IC785 IC786 IC787 IC788 IC789 IC790 IC791 IC792 IC793 IC794 IC795 IC796 IC797 IC798 IC799 IC800 IC801 IC802 IC803 IC804 IC805 IC806 IC807 IC808 IC809 IC810 IC811 IC812 IC813 IC814 IC815 IC816 IC817 IC818 IC819 IC820 IC821 IC822 IC823 IC824 IC825 IC826 IC827 IC828 IC829 IC830 IC831 IC832 IC833 IC834 IC835 IC836 IC837 IC838 IC839 IC840 IC841 IC842 IC843 IC844 IC845 IC846 IC847 IC848 IC849 IC850 IC851 IC852 IC853 IC854 IC855 IC856 IC857 IC858 IC859 IC860 IC861 IC862 IC863 IC864 IC865 IC866 IC867 IC868 IC869 IC870 IC871 IC872 IC873 IC874 IC875 IC876 IC877 IC878 IC879 IC880 IC881 IC882 IC883 IC884 IC885 IC886 IC887 IC888 IC889 IC890 IC891 IC892 IC893 IC894 IC895 IC896 IC897 IC898 IC899 IC900 IC901 IC902 IC903 IC904 IC905 IC906 IC907 IC908 IC909 IC910 IC911 IC912 IC913 IC914 IC915 IC916 IC917 IC918 IC919 IC920 IC921 IC922 IC923 IC924 IC925 IC926 IC927 IC928 IC929 IC930 IC931 IC932 IC933 IC934 IC935 IC936 IC937 IC938 IC939 IC940 IC941 IC942 IC943 IC944 IC945 IC946 IC947 IC948 IC949 IC950 IC951 IC952 IC953 IC954 IC955 IC956 IC957 IC958 IC959 IC960 IC961 IC962 IC963 IC964 IC965 IC966 IC967 IC968 IC969 IC970 IC971 IC972 IC973 IC974 IC975 IC976 IC977 IC978 IC979 IC980 IC981 IC982 IC983 IC984 IC985 IC986 IC987 IC988 IC989 IC990 IC991 IC992 IC993 IC994 IC995 IC996 IC997 IC998 IC999 IC1000

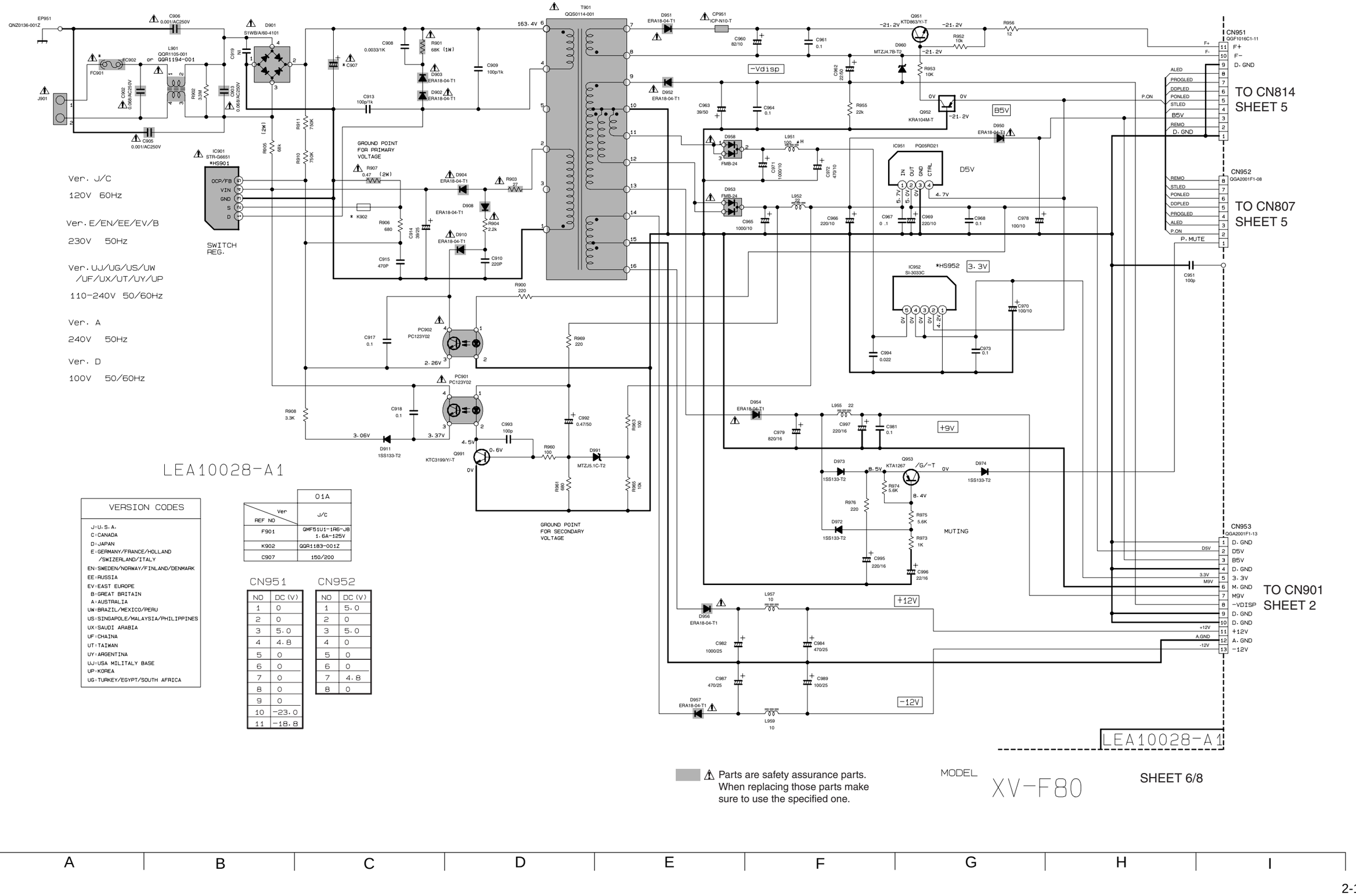
IC801

NO	DC (V)	NO	DC (V)
1	5.0	51	0
2	0	52	0
3	2.7	53	0
4	3.1	54	0
5	0	55	0
6	5.0	56	0
7	5.0	57	0
8	0	58	0
9	0	59	5.0
10	0	60	0
11	5.0	61	0
12	0	62	0
13	5.0	63	0
14	5.0	64	0
15	5.0	65	0
16	5.0	66	0
17	5.0	67	0
18	0	68	0
19	5.0	69	0
20	5.0	70	0
21	1.2	71	0
22	2.6	72	0
23	0	73	0
24	5.0	74	0
25	5.0	75	0
26	0	76	0
27	0	77	0
28	5.0	78	0
29	0	79	0
30	5.0	80	0
31	5.0		
32	5.0		
33	5.0		
34	0		
35	5.0		
36	5.0		
37	0		
38	5.0		
39	0		
40	0		
41	0		
42	0		
43	0		
44	0		
45	0		
46	0		
47	0		
48	0		
49	0		
50	0		

Audio signal
Video signal

MODEL XV-F80 SHEET 5/8

■ Power supply section



VERSION CODES
J:U.S.A.
C:CANADA
D:JAPAN
E:GERMANY/FRANCE/HOLLAND /SWIZERLAND/ITALY
EN:SWEDEN/NORWAY/FINLAND/DENMARK
EE:RUSSIA
EV:EAST EUROPE
B:GREAT BRITAIN
A:AUSTRALIA
UW:BRAZIL/MEXICO/PERU
US:SINGAPOLE/MALAYSIA/PHILIPPINES
UX:SAUDI ARABIA
UF:CHAINA
UT:TAIWAN
UY:ARGENTINA
UJ:USA MILITALY BASE
UP:KOREA
UG:TURKEY/EGYPT/SOUTH AFRICA

Ver / REF NO	01A
	J/C
F901	QMF51U1-1R6-J8 1.6A-125V
K902	QQR1183-001Z
C907	150/200

CN951

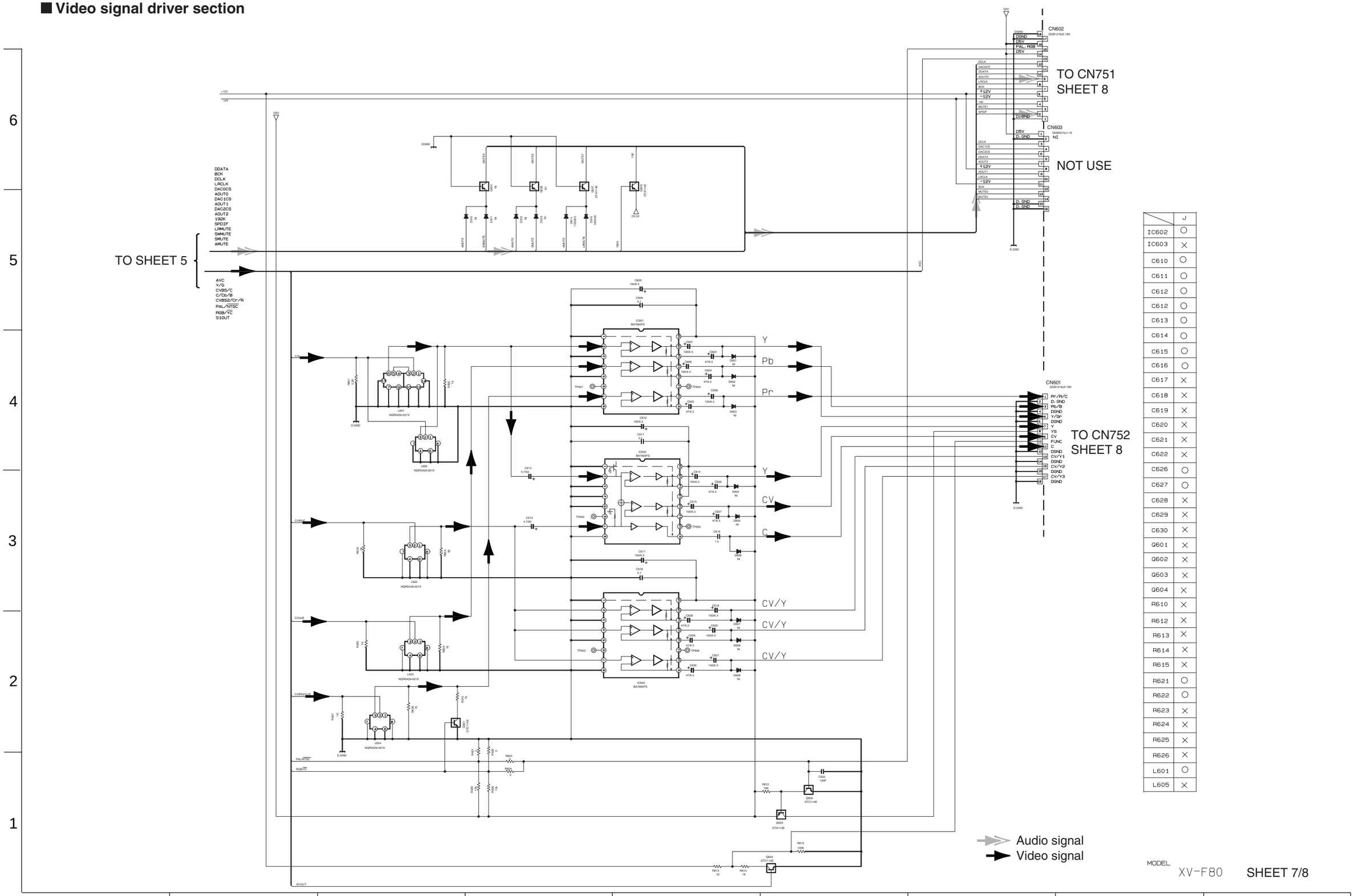
NO	DC (V)
1	0
2	0
3	5.0
4	4.8
5	0
6	0
7	0
8	0
9	0
10	-23.0
11	-18.8

CN952

NO	DC (V)
1	5.0
2	0
3	5.0
4	0
5	0
6	0
7	4.8
8	0

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

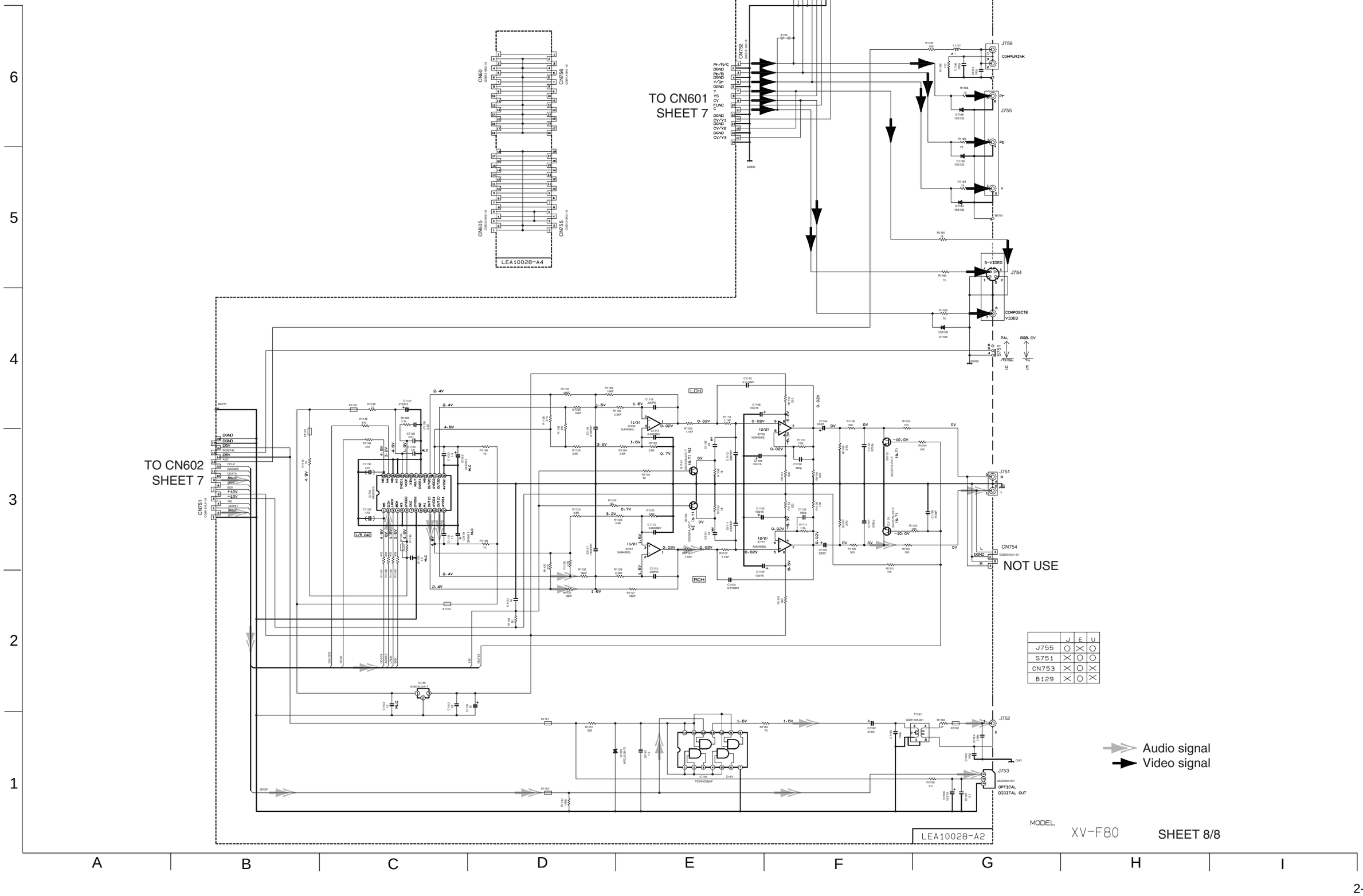
■ Video signal driver section



	J
IC602	○
IC603	×
C610	○
C611	○
C612	○
C612	○
C613	○
C614	○
C615	○
C616	○
C617	×
C618	×
C619	×
C620	×
C621	×
C622	×
C626	○
C627	○
C628	×
C629	×
C630	×
Q601	×
Q602	×
Q603	×
Q604	×
R610	×
R612	×
R613	×
R614	×
R615	×
R621	○
R622	○
R623	×
R624	×
R625	×
R626	×
L601	○
L605	×

MODEL XV-F80 SHEET 7/8

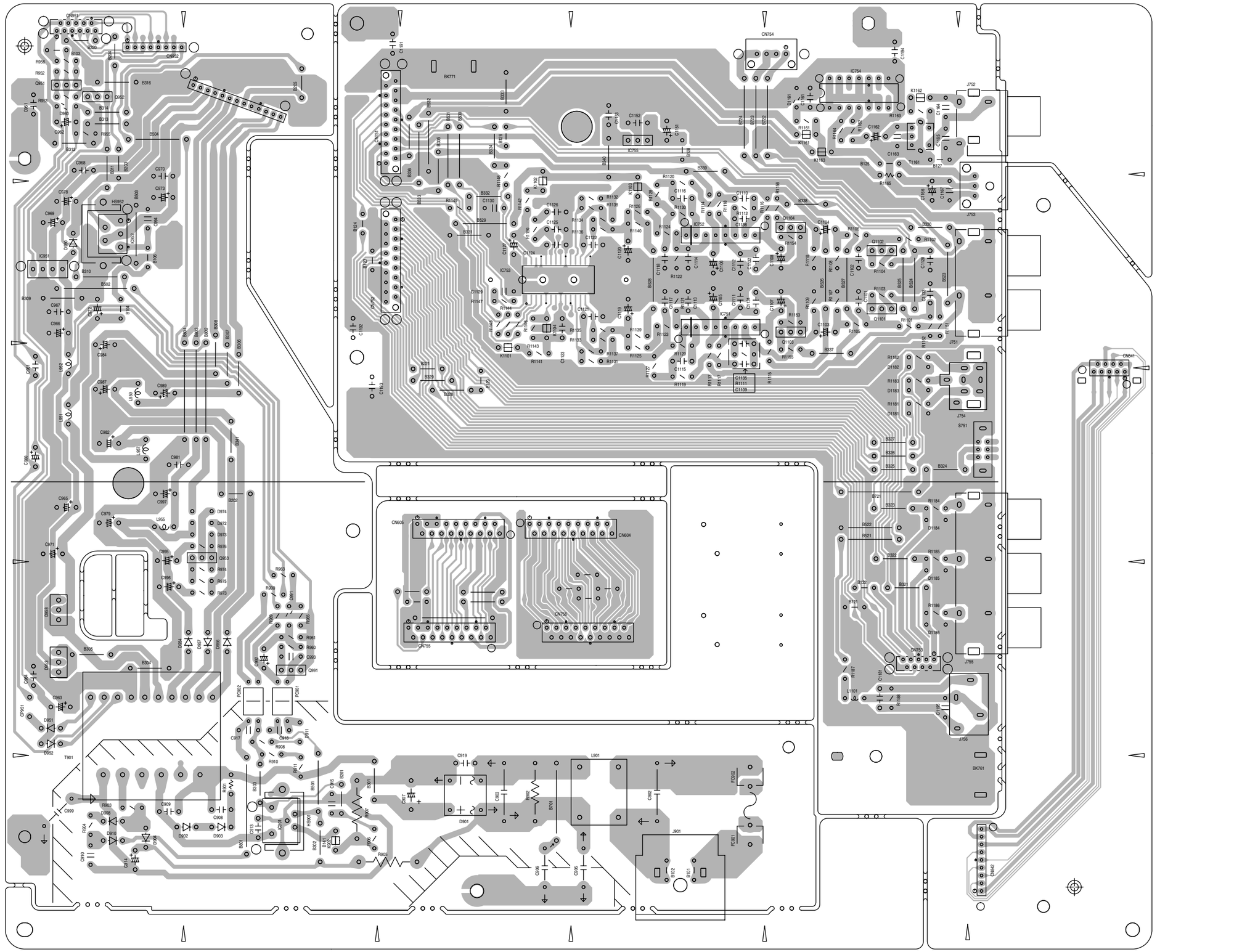
■ Audio / video signal output section



	J	E	U
J755	○	×	○
S751	×	○	○
CN753	×	○	×
B129	×	○	×

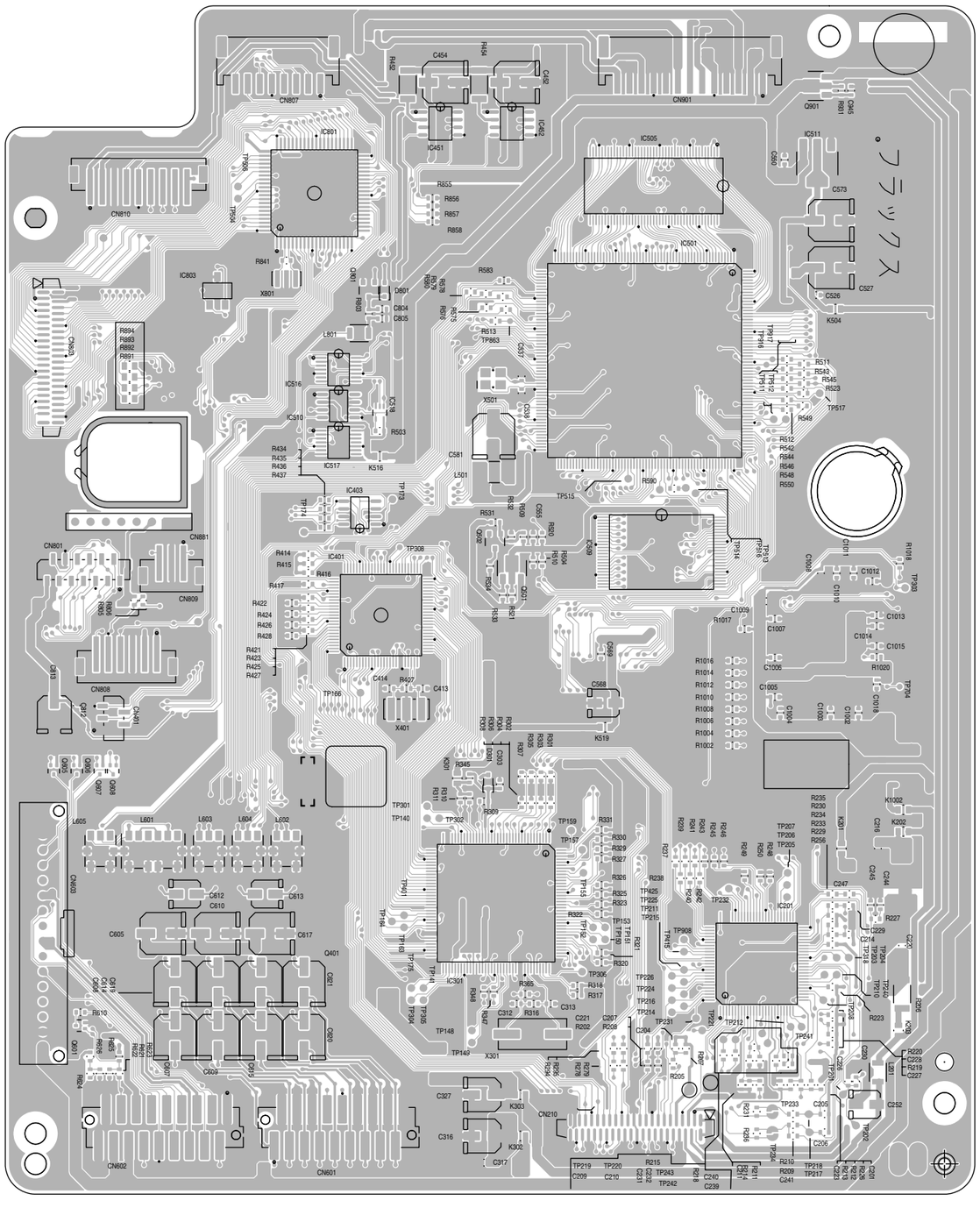
Printed circuit boards

■ Main board

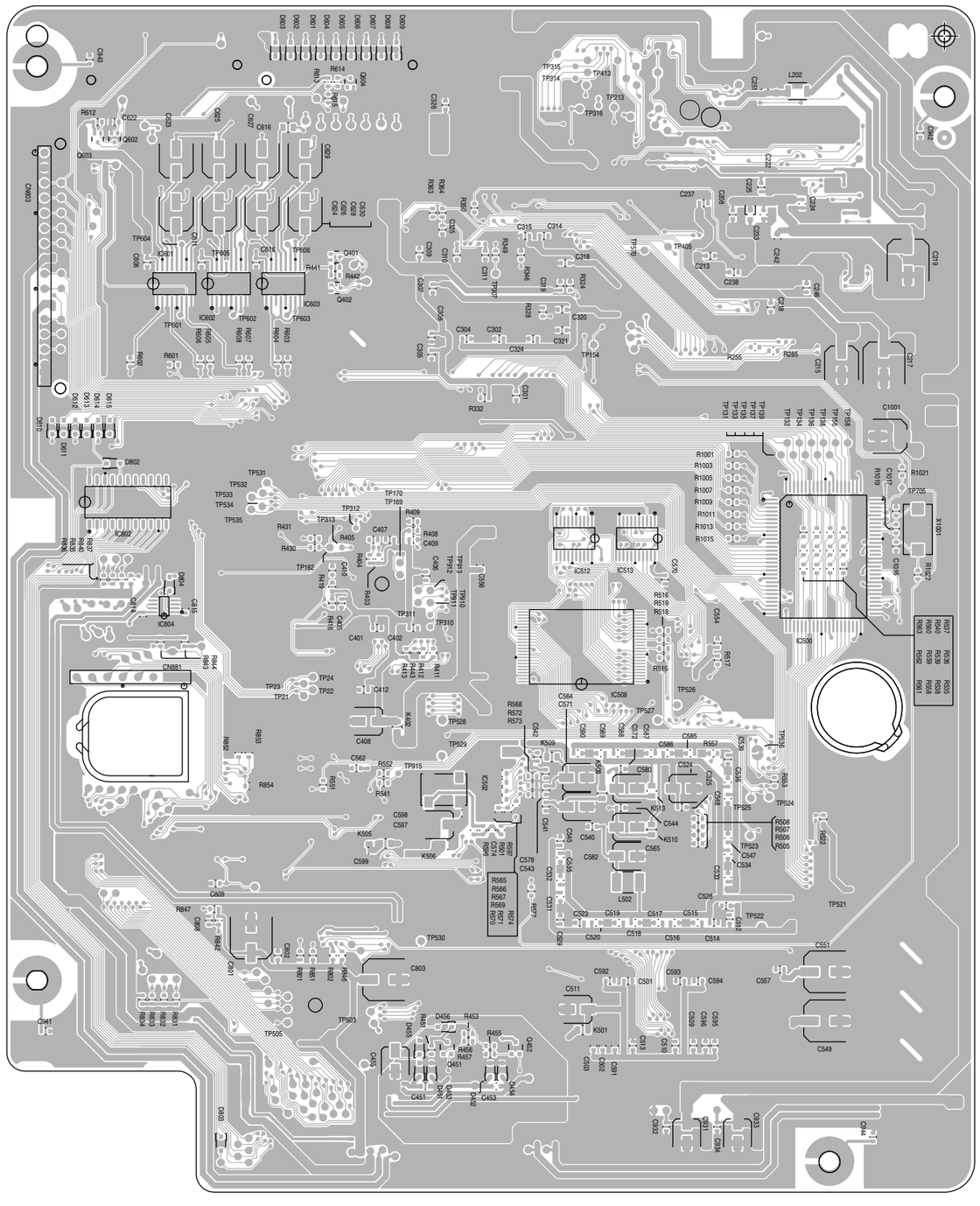


■ Servo control board

Forward side

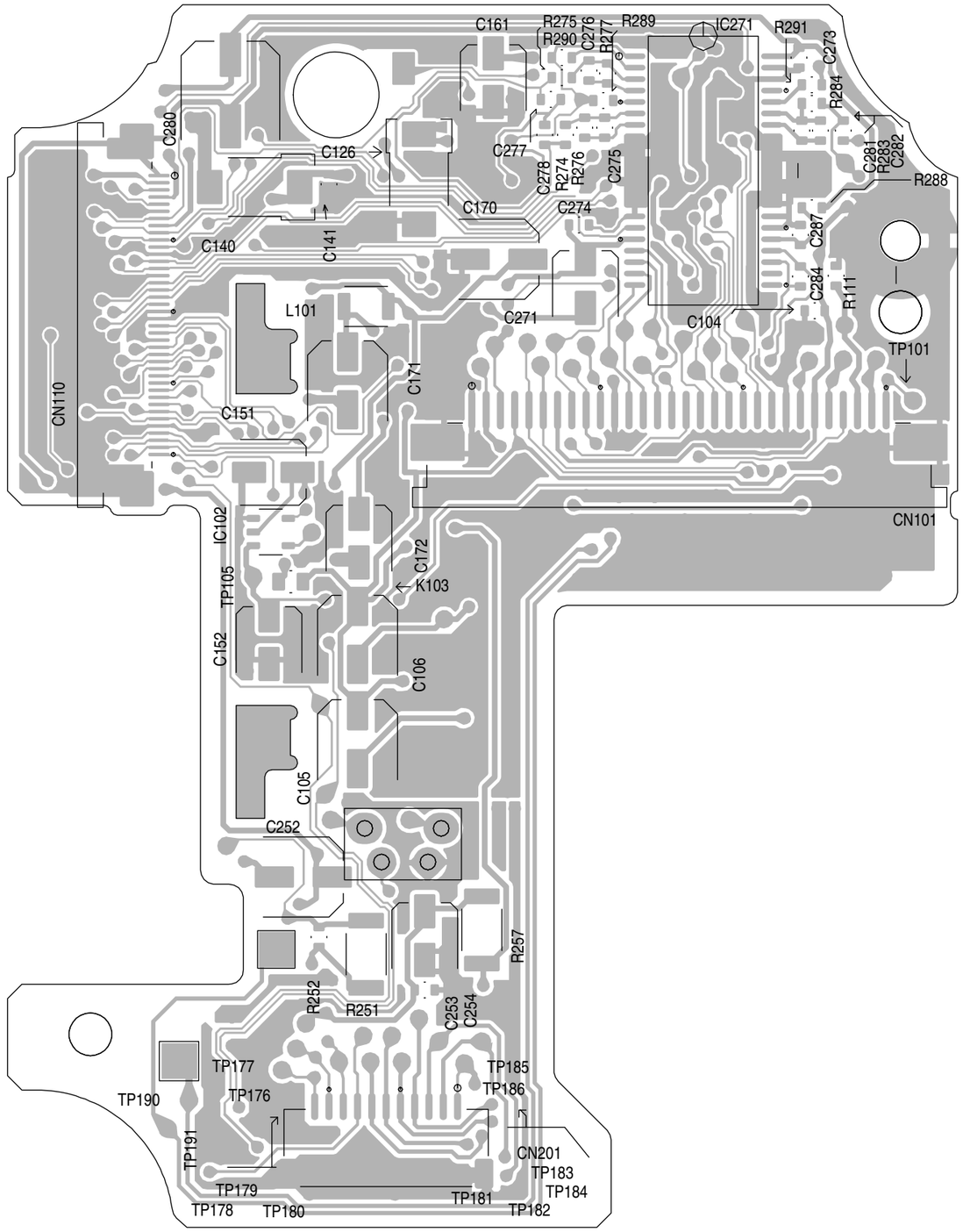


Reverse side

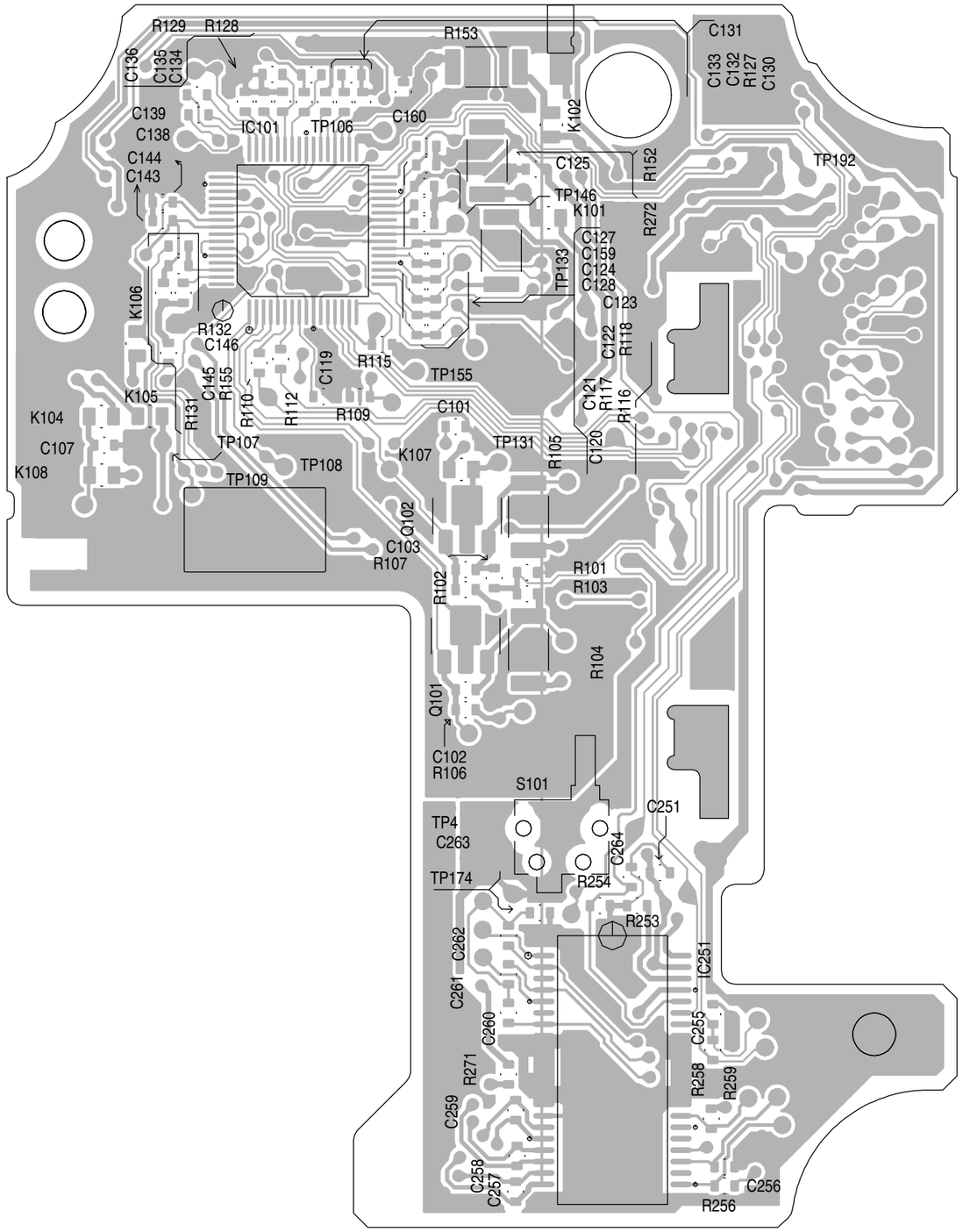


■ Frontend & motor drive section

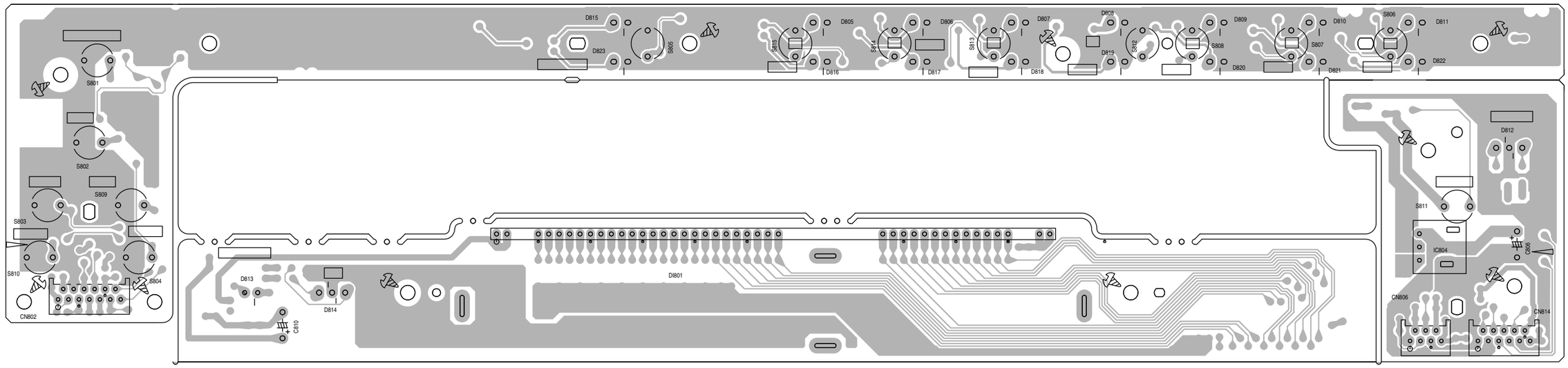
Reverse side



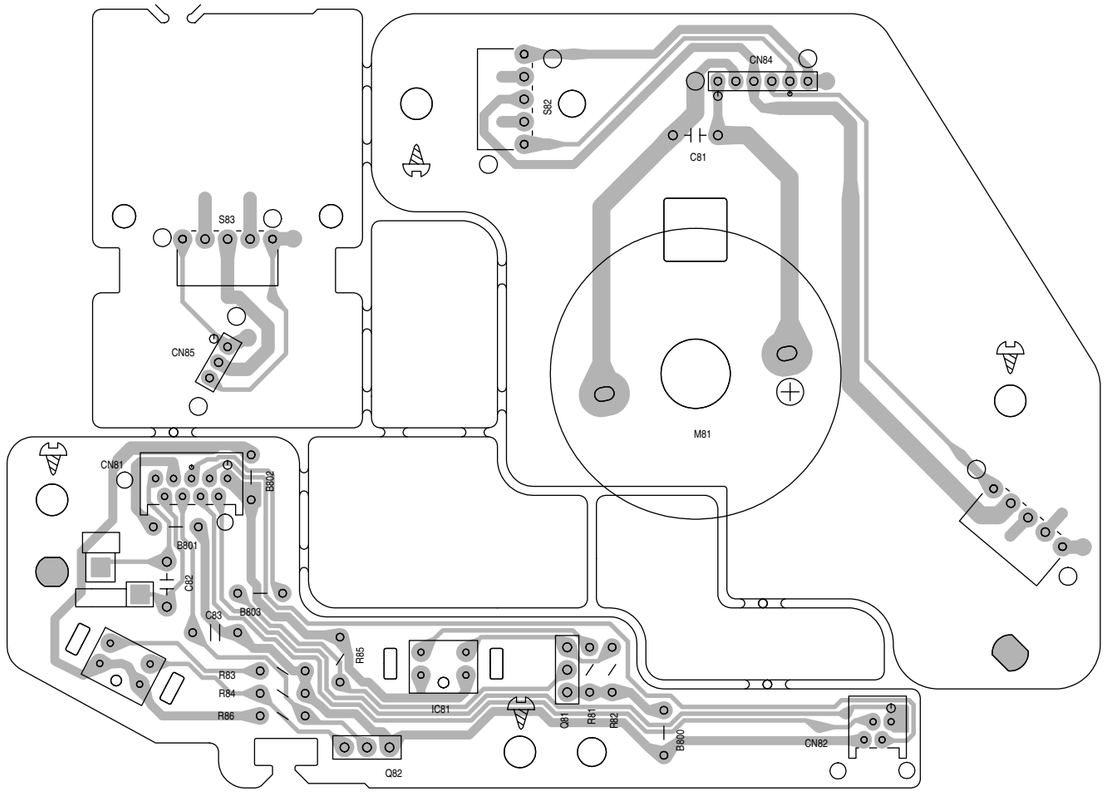
Forward side



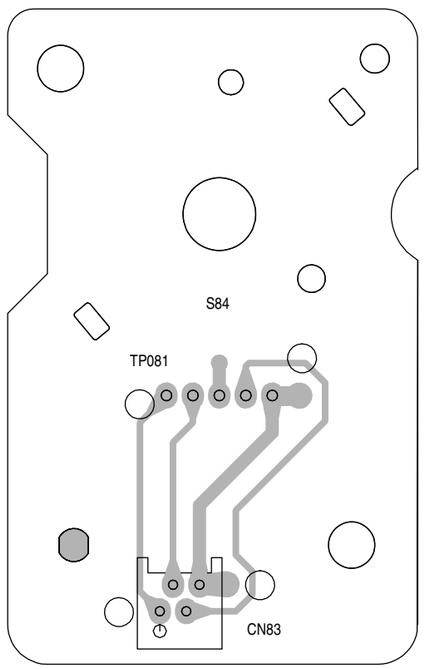
■ Operation switch & FL Display board



■ Motor & detection switch board



■ Cam switch board



PARTS LIST

[XV-F80BK/XV-F85GD]

* All printed circuit boards and its assemblies are not available as service parts.

Area Suffix (XV-F80BK)

J ---------- U.S.A.
C ---------- Canada

Area Suffix (XV-F85GD)

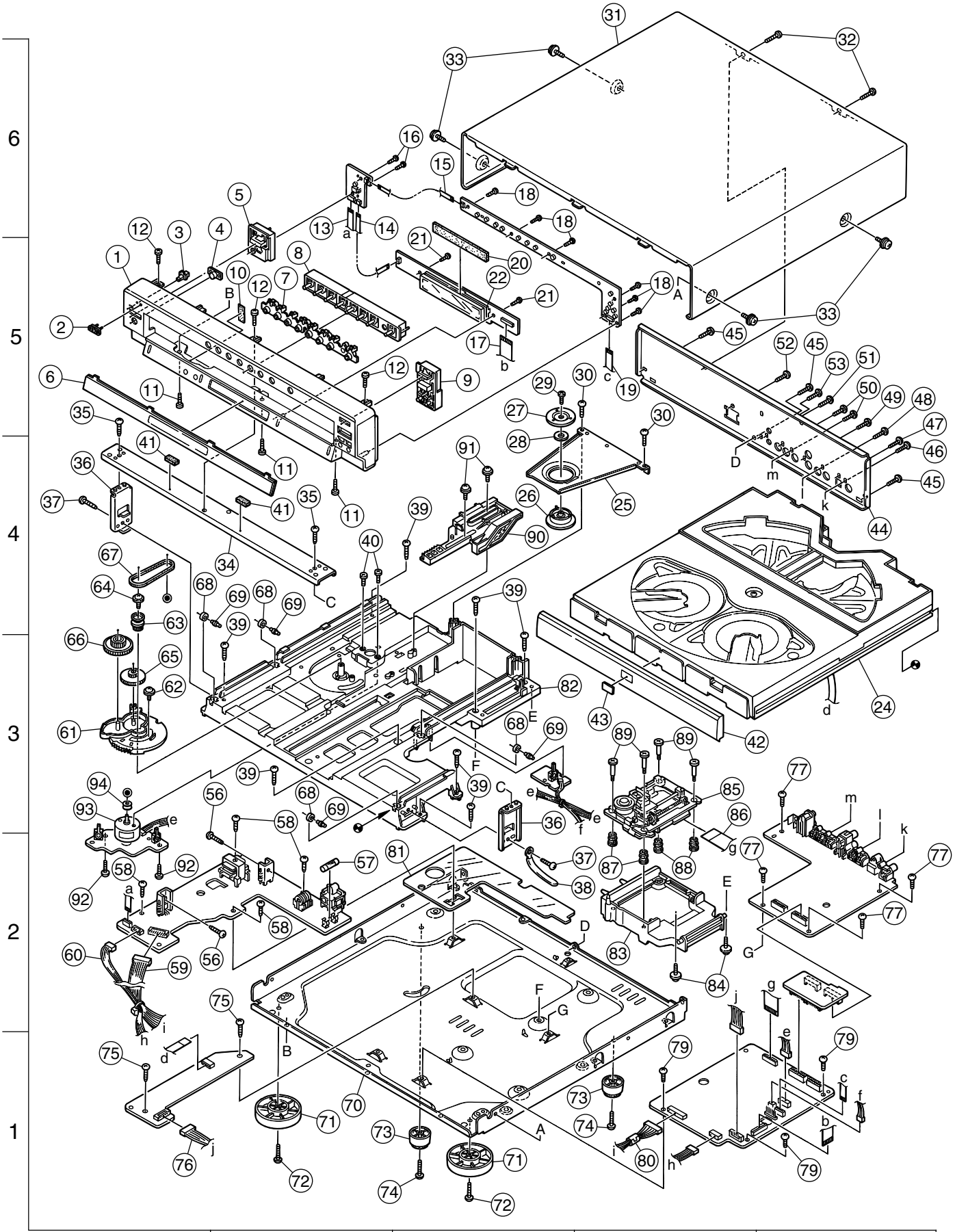
J ---------- U.S.A.

- Contents -

Exploded view of general assembly and parts list ---------- 3-2
Tray mechanism assembly and parts list ---------- 3-6
Traverse mechanism assembly and parts list ---------- 3-8
Grease points ---------- 3-10
Electrical parts list ---------- 3-19
Packing materials and accessories parts list ---------- 3-28

Exploded view of general assembly and parts list

Block No. M1MM



■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LE10258-001A	FRONT PANEL	1		80C,80J
		LE10258-002A	FRONT PANEL	1		85J
	2	VJD5429-001SS	JVC MARK	1		
	3	LE30961-001A	INDICATOR	1		
	4	E408131-002	REMOTE LENS	1		80C,80J
		E408131-001	REMOTE LENS	1		85J
	5	LE20600-001A	PUSH BUTTON	1		80C,80J
		LE20600-003A	PUSH BUTTON	1		85J
	6	LE20599-007A	WINDOW SCREEN	1		
	7	LE30962-002A	INDICATOR	1		
	8	LE20601-004A	PUSH BUTTON	1		80C,80J
		LE20601-006A	PUSH BUTTON	1		85J
	9	LE20602-001A	PUSH BUTTON	1		80C,80J
		LE20602-003A	PUSH BUTTON	1		85J
	10	E306805-110	SPACER	1		
	11	QYSDSG3008M	SCREW	3		80C,80J
		QYSDSG3008N	T.SCREW	3		85J
	12	QYSDSG3008M	SCREW	3		80C,80J
		QYSDSG3008N	T.SCREW	3		85J
	13	QUQ110-1124AJ	FFC WIRE	1		
	14	QUQ110-0711BJ	FFC WIRE	1		
	15	QUQ110-0410AJ	FFC WIRE	1		
	16	QYSBSF2608Z	T.SCREW	2		
	17	QUQ105-4026AJ	FFC WIRE	1		
	18	QYSBSF2608Z	T.SCREW	6		
	19	QUQ110-1320AJ	FFC WIRE(7954)	1		
	20	E306805-014	FELT SPACER	1		
	21	QYSBSF2608Z	T.SCREW	2		
	22	LE30960-001A	FL HOLDER	1		
	24	---------	TRAY MECHANISM	1	See 3-6 page	
	25	LV32740-001A	CLAMPER BASE	1		
	26	LV32417-001A	CLAMPER	1		
	27	LV42089-001A	YOKE	1		
	28	LV41118-003A	MAGNET	1		
	29	LV41741-001A	SPECIAL SCREW	1		
	30	QYSBSF3008Z	SCREW	2		
	31	LE20596-001A/S/	METAL COVER	1		80C,80J
		LE20596-003A/S/	METAL COVER	1		85J
	32	QYSBSGY3008E	SPECIAL SCREW	2		
	33	E406308-003	SPECIAL SCREW	4		80C,80J
		E406308-004	SPECIAL SCREW	4		85J
	34	LE20598-001A	MECHA FRAME	1		
	35	QYSBSG3008Z	T.SCREW	2		
	36	LE30959-002A	STAY BRACKET	2		
	37	QYSBSF3008Z	SCREW	2		
	38	VKZ4001-110S	WIRE HOLDER	1		
	39	QYSBSG3008Z	T.SCREW	7		

Explanation of area column

80J =XV-F80BK ver.J
80C =XV-F80BK ver.C
85J =XV-F85GD ver.J

■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	40	QYSDSP2604Z	SCREW	2		
	41	LV30225-028A	SPACER	2		
	42	LE10259-001A	FITTING	1		80C,80J
		LE10259-005A	FITTING	1		85J
	43	LE40794-001A	MARK	1		
	44	LE20597-001A	REAR PANEL	1		80C,80J
		LE20597-005A	REAR PANEL	1		85J
	45	QYSBSGY3008M	SPECIAL SCREW	3	REAR + CHASSIS	
	46	QYSBSGY3008M	SPECIAL SCREW	1	COAXIAL	
	47	QYSBSGY3008M	SPECIAL SCREW	1	OPTICAL OUT	
	48	QYSBSGY3008M	SPECIAL SCREW	1	AUDIO OUT	
	49	QYSBSGY3008M	SPECIAL SCREW	1	S-VIDEO	
	50	QYSBSGY3008M	SPECIAL SCREW	2	COMPONENT	
	51	QYSBSGY3008M	SPECIAL SCREW	1	AV COMPULINK	
	52	QYSBSGY3008M	SPECIAL SCREW	1	AC INLET	
	53	QYSBSGY3008M	SPECIAL SCREW	1		
	56	QYSBSG3008Z	TAPPING SCREW	2		
⚠	57	QMF51U1-1R6-J8	FUSE	1		
	58	QYSBSG3006E	T.SCREW	4		
	59	QJJ015-133203	WIRE	1		
	60	QJA003-084403	SIN CR C-C WIRE	1		
	61	LV21034-001A	LOADING BASE	1		
	62	E65923-003	TAPPING SCREW	1		
	63	LV32737-001A	L.PULLEY GEAR	1		
	64	E65923-003	TAPPING SCREW	1		
	65	LV32738-001A	LOAD.GEAR(1)	1		
	66	LV32739-001A	LOAD.GEAR(2)	1		
	67	LV42341-001A	LOAD.BELT	1		
	68	E407149-001SS	RUBBER TUBE	4		
	69	E407140-001SS	C.D ROLLER	4		
	70	LE10257-001A	CHASSIS BASE	1		
	71	LE30967-001A	FOOT	2		
	72	QYSBST3010Z	T.SCREW	2		
	73	E47227-045	FOOT ASSY	2		
	74	QYSBST3010Z	T.SCREW	2		
	75	QYSBSG3006E	T.SCREW	2		
	76	QJA003-092204	SIN CR C-C WIRE	1		
	77	QYSBSG3006E	T.SCREW	4		
	79	QYSBSG3006E	T.SCREW	3		
	80	QQR1267-001	FERRITE CORE	1		
	81	LE30966-001A	PROTECT SHEET	1		
	82	LV10529-001A	CHASSIS	1		
	83	LV21033-001A	TM U/D BASE	1		
	84	E65923-003	TAPPING SCREW	2		
	85	---------	TRAVERSE MECHANISM	1	See 3-8 page	
	86	QUQ105-4018AJ	FFC WIRE	1		
	87	LV41120-003A	INSULATOR	2		

Explanation of area column

80J =XV-F80BK ver.J
80C =XV-F80BK ver.C
85J =XV-F85GD ver.J

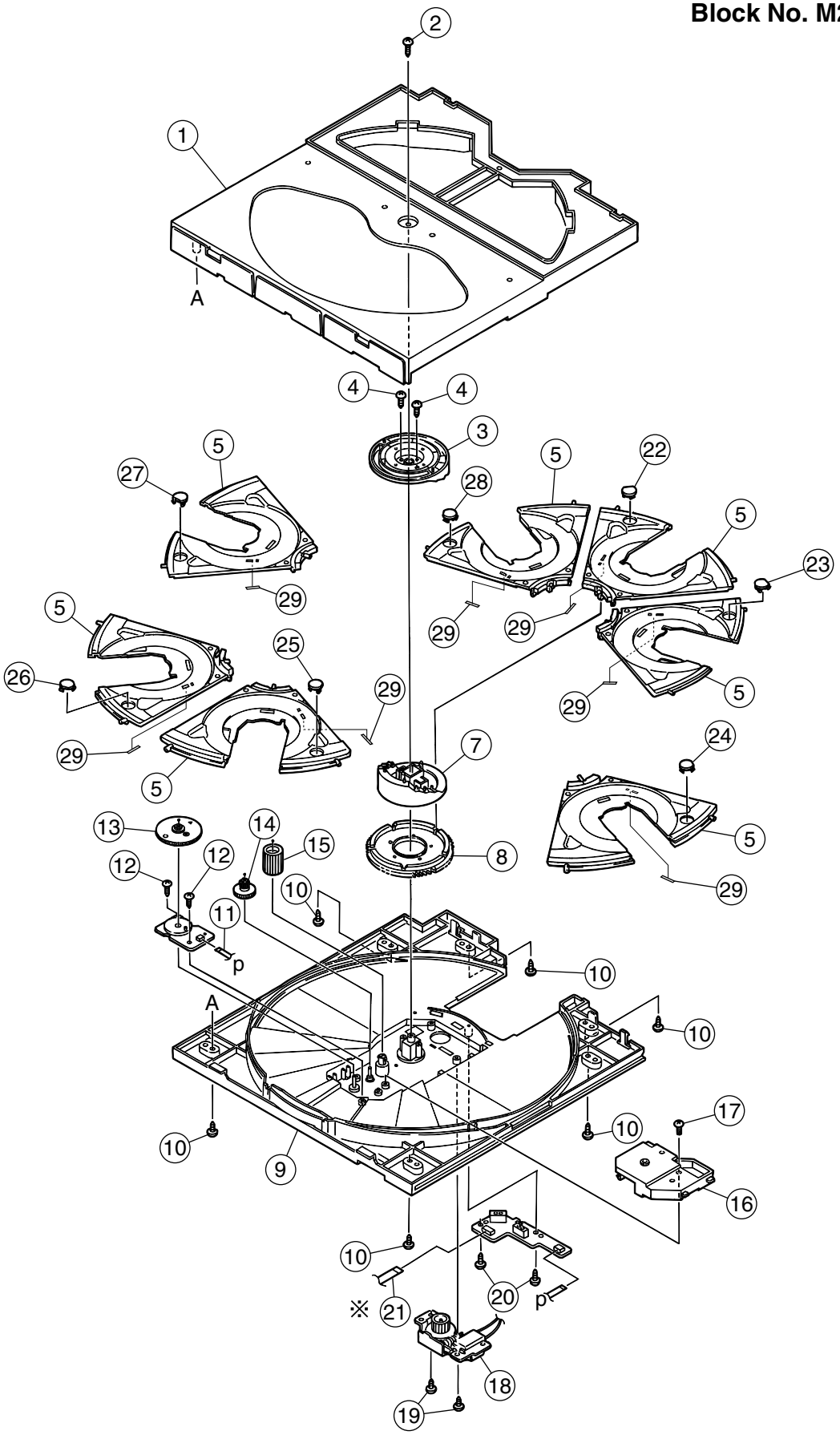
■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	88	LV41120-004A	INSULATOR	2		
	89	LV41119-001A	SPECIAL SCREW	4		
	90	LV21035-001A	TM U/D CAM	1		
	91	E65923-003	TAPPING SCREW	2		
	92	QYSBSF3008Z	SCREW	2		
	93	RF-500TB-12560	MOTOR	1		
	94	LV42340-001A	MOTOR PULLEY	1		

Tray mechanism assembly and parts list

Block No. M2MM



※ : This FFC wire is the same as the wire "d" in the General assembly(page 3-2).

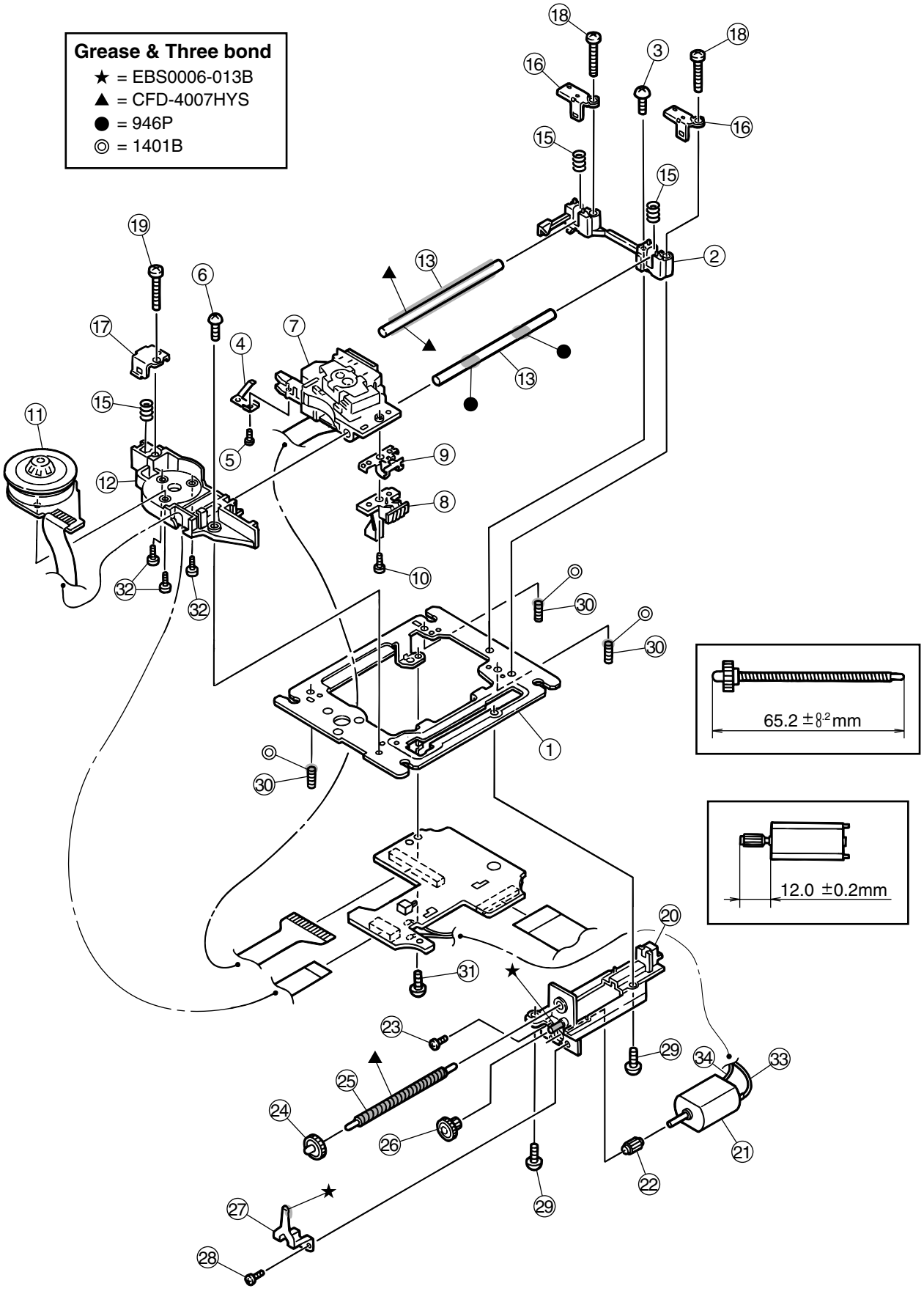
■ Parts list (Tray mechanism assembly)

Block No. M2MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV10532-001A	MAIN TRAY COVER	1		
	2	QYSBSF3008Z	SCREW	1		
	3	LV21037-001A	U/D CAM(U)	1		
	4	QYSBSF3008Z	SCREW	2		
	5	LV10531-001A	SUB TRAY	7		
	7	LV21036-001A	U/D CAM(L)	1		
	8	LV32741-001A	ACT.GEAR(1)	1		
	9	LV10530-001A	MAIN TRAY	1		
	10	QYSBSF3008Z	SCREW	6		
	11	QUQ110-0422BJ	FFC WIRE	1		
	12	QYSBSF3006M	SCREW	2		
	13	LV32743-001A	CAM GEAR(2)	1		
	14	LV32742-001A	CAM GEAR(1)	1		
	15	LV42343-001A	ACT.GEAR(2)	1		
	16	LV32744-001A	GEAR COVER	1		
	17	QYSBSF3006M	SCREW	1		
	18	M.BASE-L71-1M	MOTOR BASE UNIT	1		
	19	QYSBSF3008Z	SCREW	2		
	20	QYSBSF3008Z	SCREW	2		
	21	QUQ110-0922AJ	FFC WIRE	1		
	22	LV32750-001A1	NUMBER PLATE 1	1		
	23	LV32750-001A2	NUMBER PLATE 7	1		
	24	LV32750-001A3	NUMBER PLATE 6	1		
	25	LV32750-001A4	NUMBER PLATE 5	1		
	26	LV32750-001A5	NUMBER PLATE 4	1		
	27	LV32750-001A6	NUMBER PLATE 3	1		
	28	LV32750-001A7	NUMBER PLATE 2	1		
	29	LV42342-001A	REFLECTOR	7		

Traverse mechanism assembly and parts list

Block No. M3MM



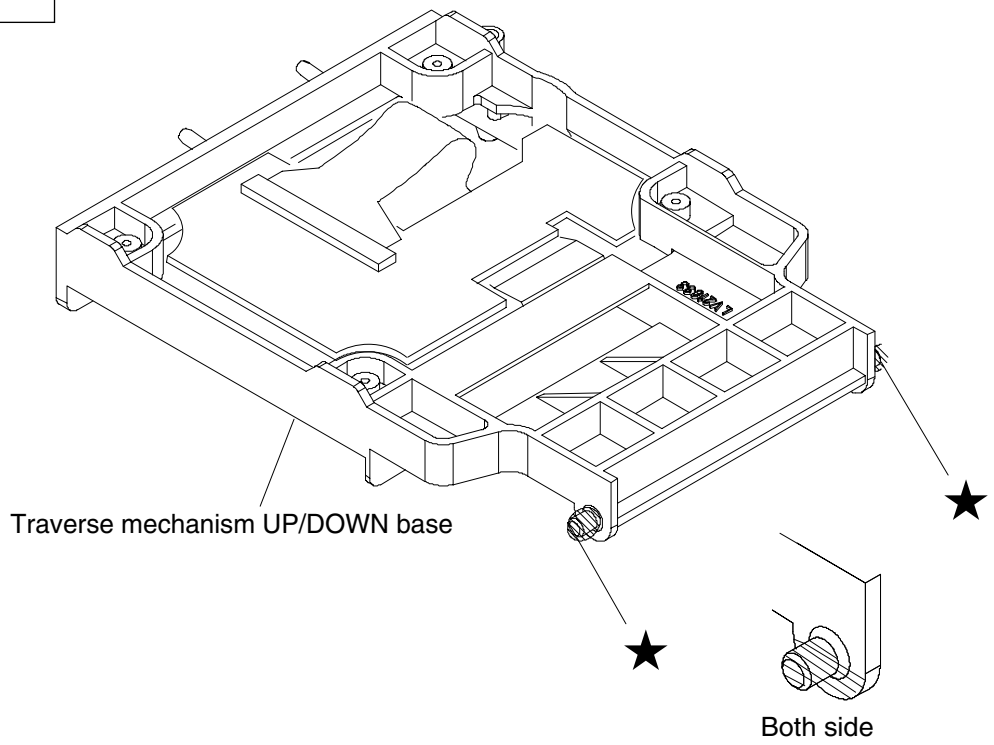
■ Parts list (Traverse mechanism assembly)

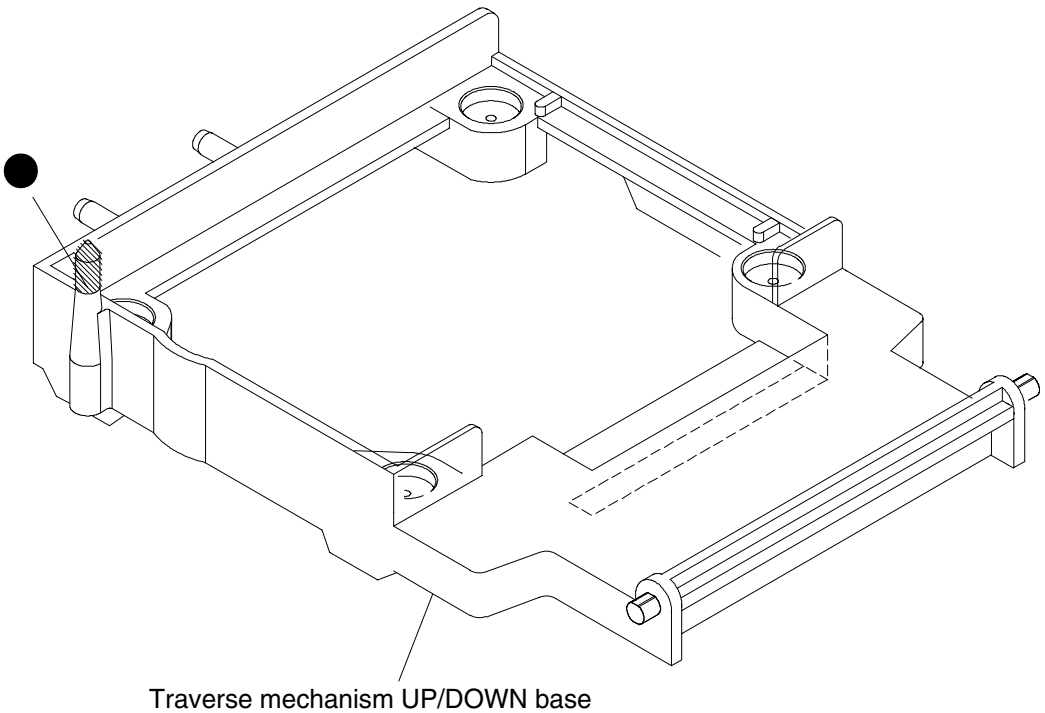
Block No. M3MM

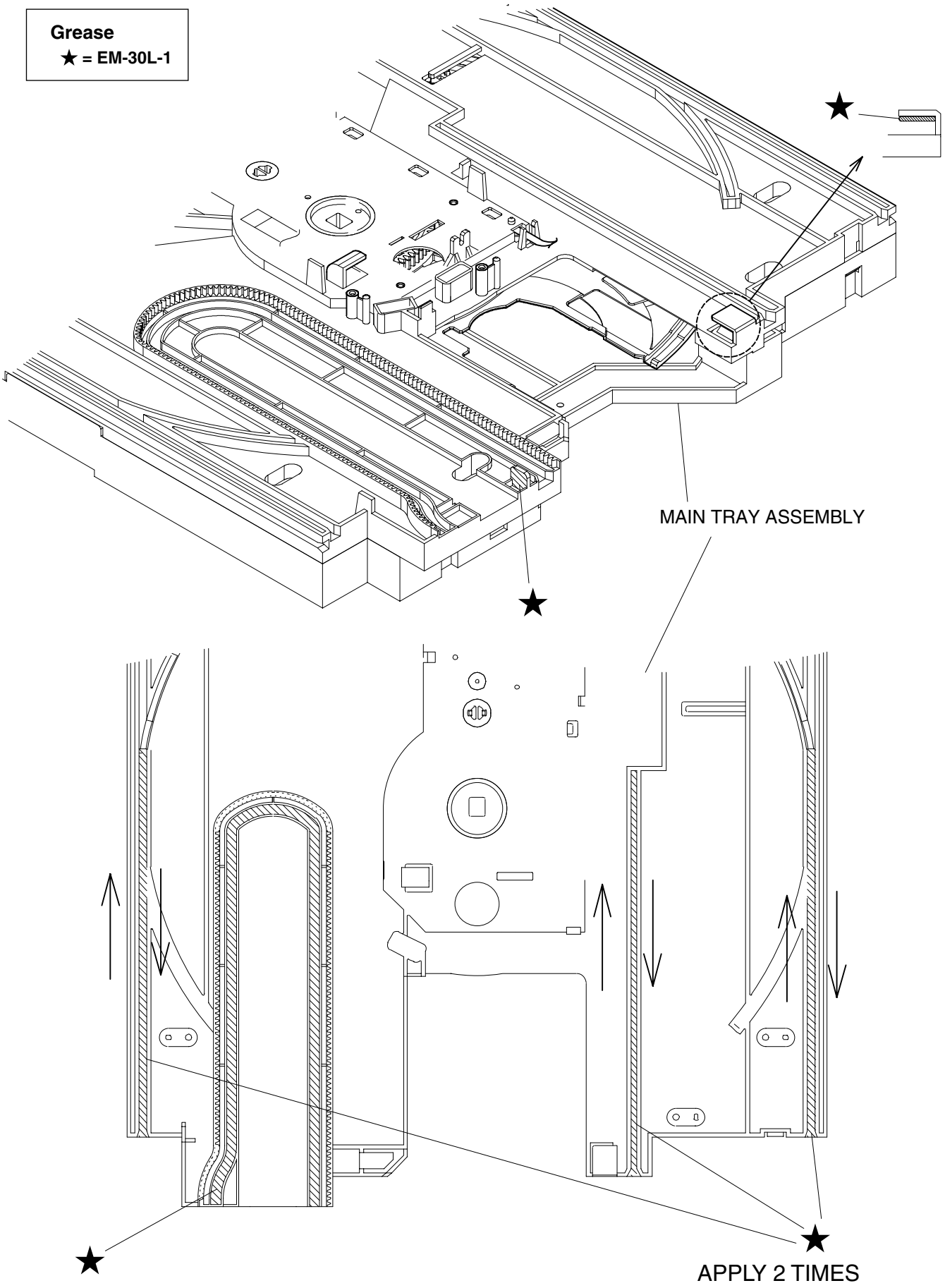
⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LE20572-001A	MECHA BASE	1		
	2	LV20635-001A	SHAFT HOLDER	1		
	3	QYSBST2606M	T.SCREW	1		
	4	LV31743-002A	P.U. SPRING	1		
	5	QYSPSGT1416M	MINI SCREW	1		
	6	QYSBST2606M	T.SCREW	1		
	7	OPTIMA-2010B1	DVD PICK UP	1		
	8	LV31670-001A	SWITCH ACTUATOR	1		
	9	LV31666-002A	LEAD SPRING	1		
	10	QYSPSGT2040M	SCREW	1		
	11	QAR0180-001	SPINDLE MOTOR	1		
	12	LE20573-001A	SPINDLE BASE	1		
	13	LV41121-002A	SHAFT	2		
	15	LV41732-001A	SKEW SPRING	3		
	16	LV31669-001A	SHAFT STOPPER R	2		
	17	LV31668-001A	SHAFT STOPPER F	1		
	18	QYSPST2614M	SCREW	2		
	19	QYSPST2614M	SCREW	1		
	20	LV31746-004A	FEED HOLDER ASSY	1		
	21	QAR0165-001	FEED MOTOR	1		
	22	LV41510-201A	FEED GEAR T	1		
	23	QYSPSPU2040M	SCREW	1		
	24	LV41512-201A	FEED GEAR E	1		
	25	LV41517-001A	LEAD SCREW	1		
	26	LV41511-202A	FEED GEAR M	1		
	27	LV31667-001A	THRUST SPRING	1		
	28	QYSPSPU2040M	SCREW	1		
	29	QYSBST2606M	T.SCREW	2		
	30	QYYASPF2608N	HEX SCREW	3		
	31	QYSBST2606M	T.SCREW	1		
	32	QYSPSPU1740Z	SCREW	3		
	33	QUB543-05A1A1	SIN TWIST WIRE	1		
	34	QUB544-04A1A1	SIN TWIST WIRE	1		

Grease points

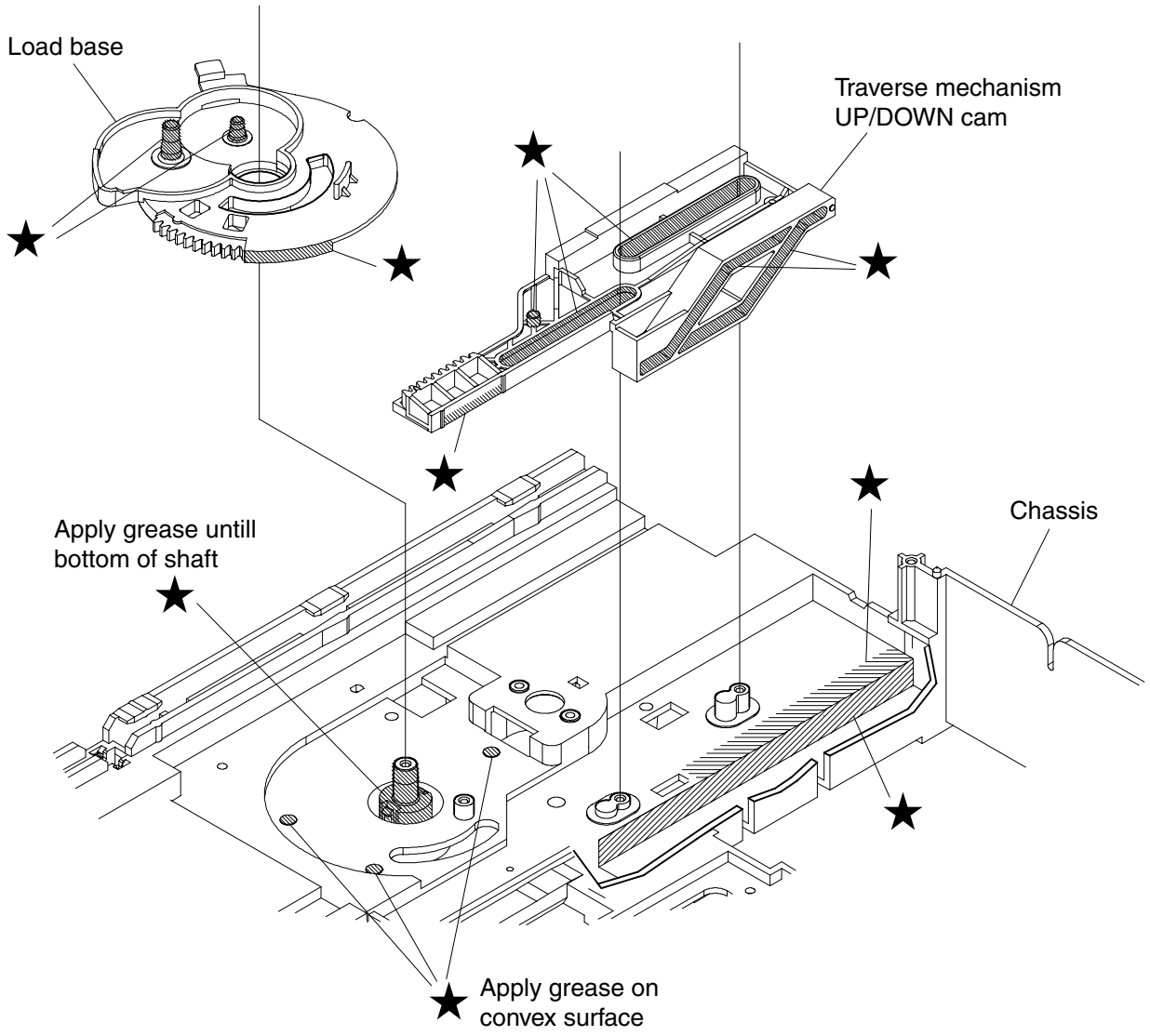
Grease
★ = EM-30L-1
● = FL-7750



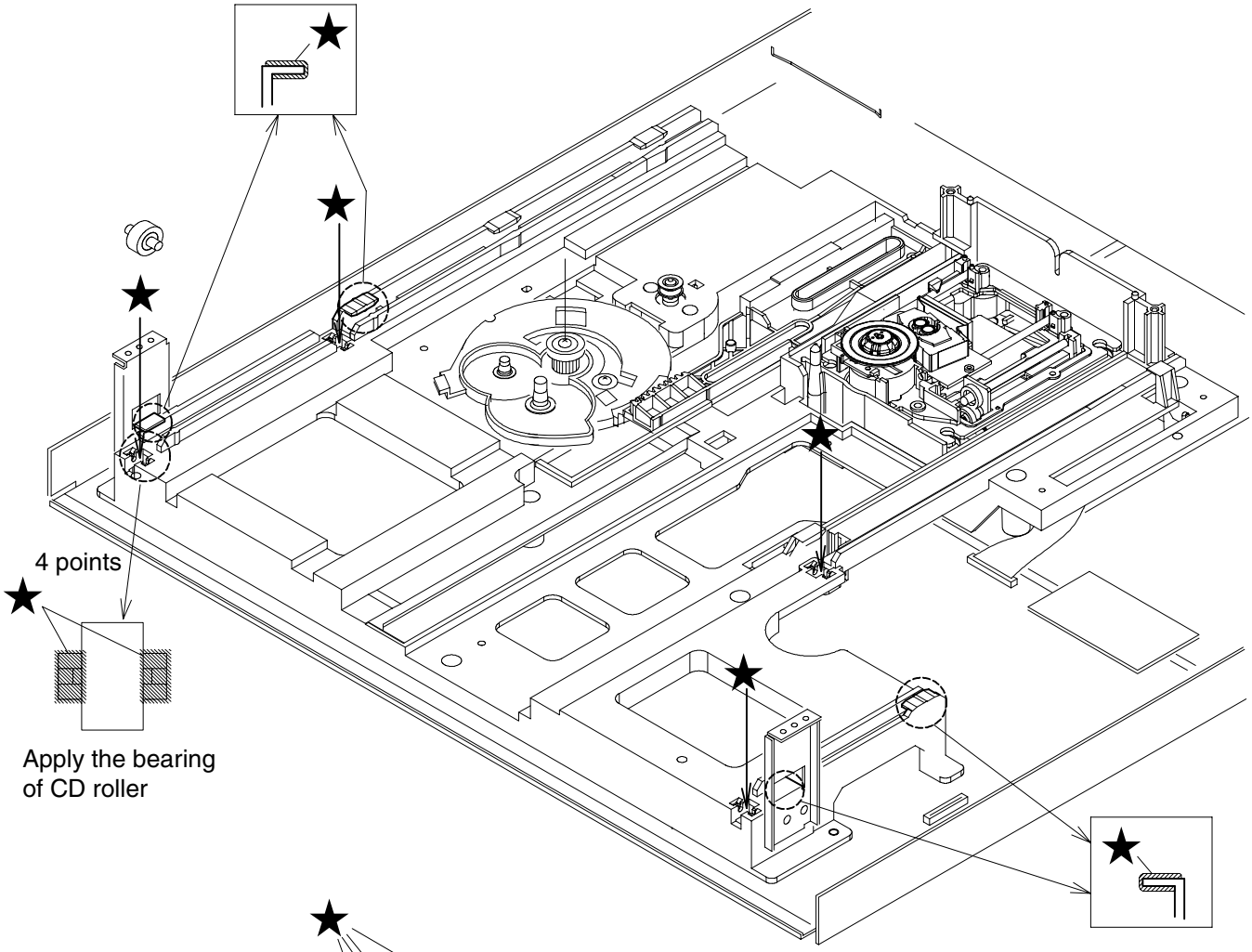


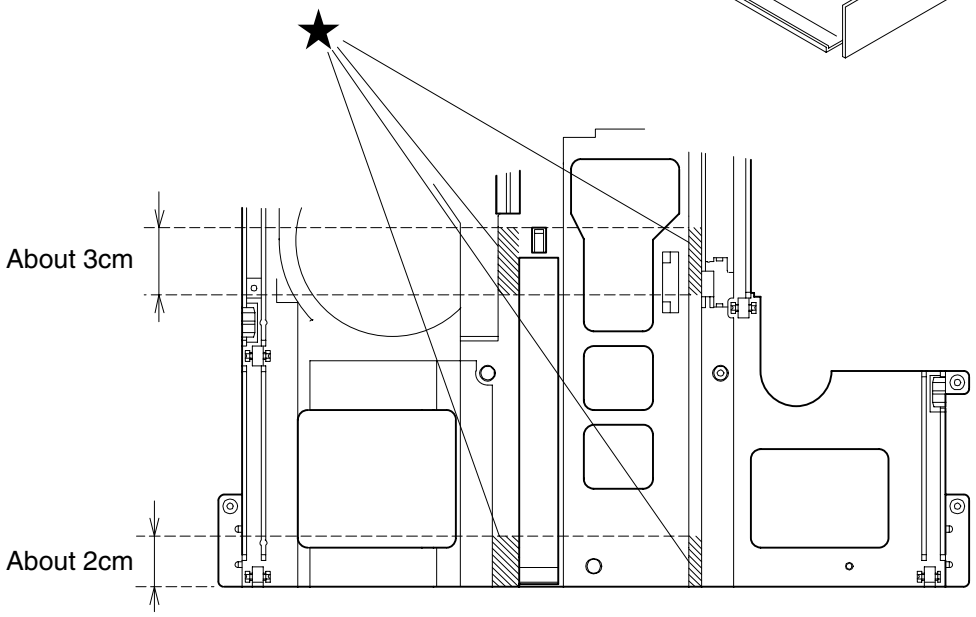

Grease
★ = EM-30L-1
MAIN TRAY ASSEMBLY
APPLY 2 TIMES

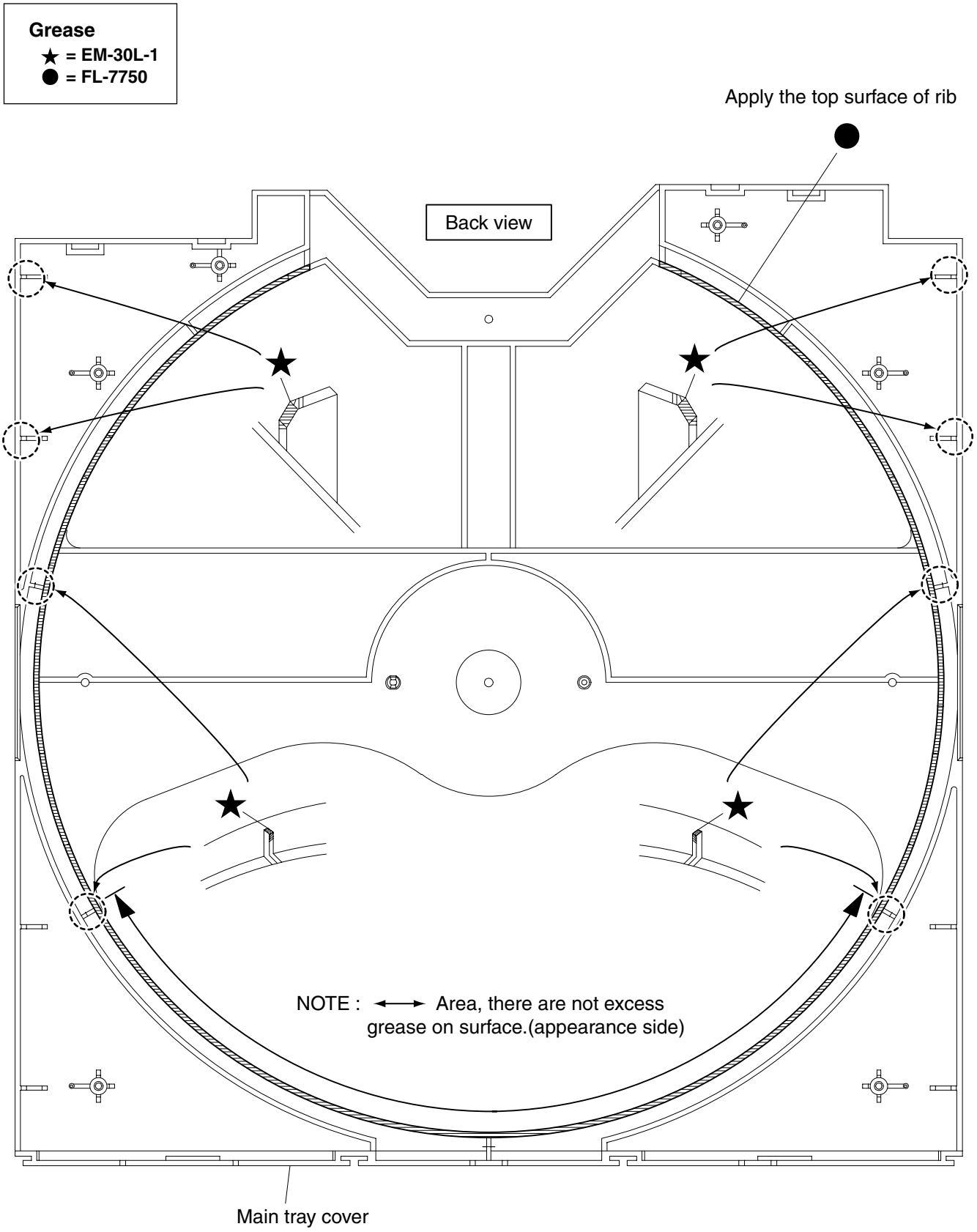
Grease
★ = EM-30L-1

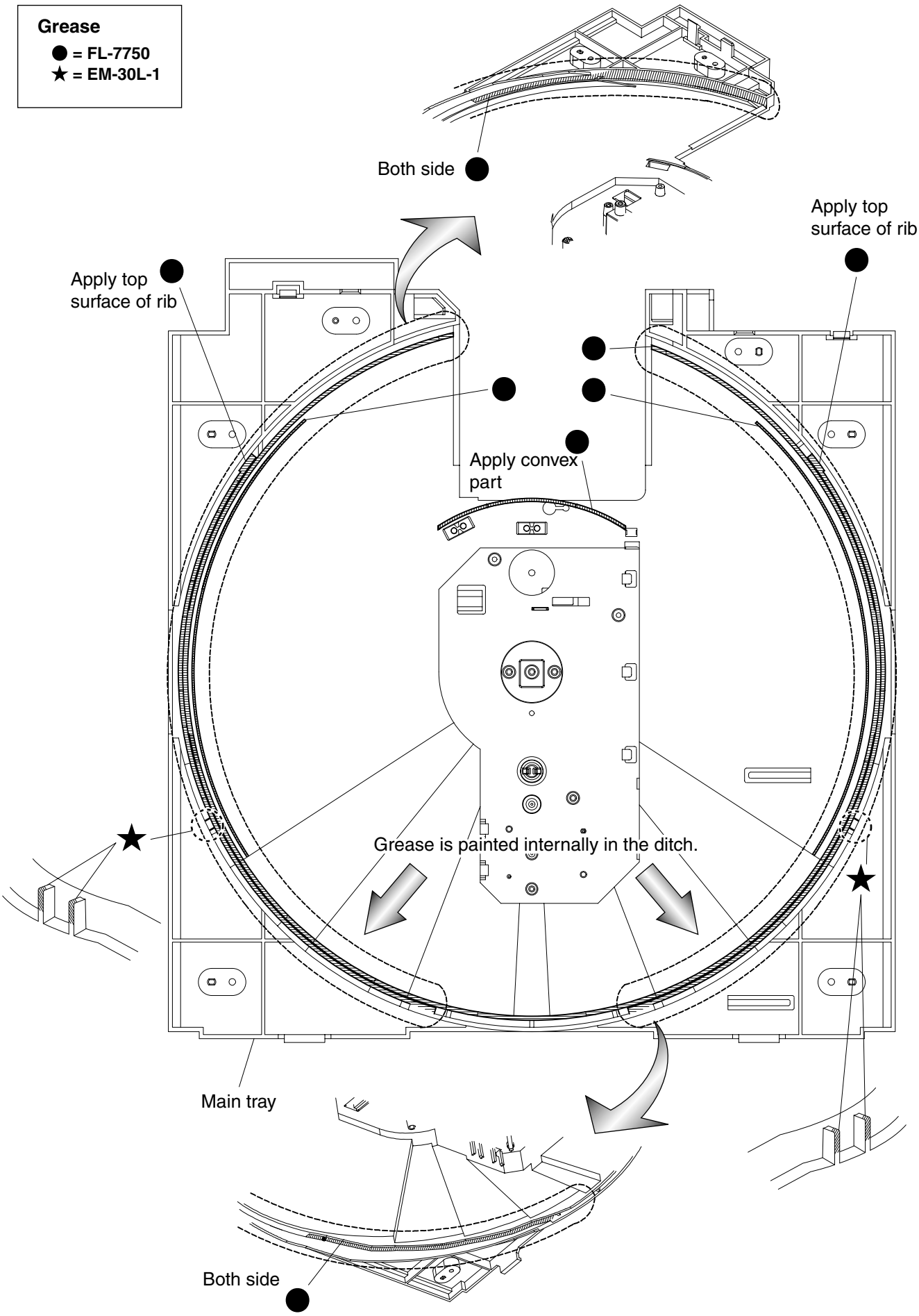


Grease
★ = EM-30L-1

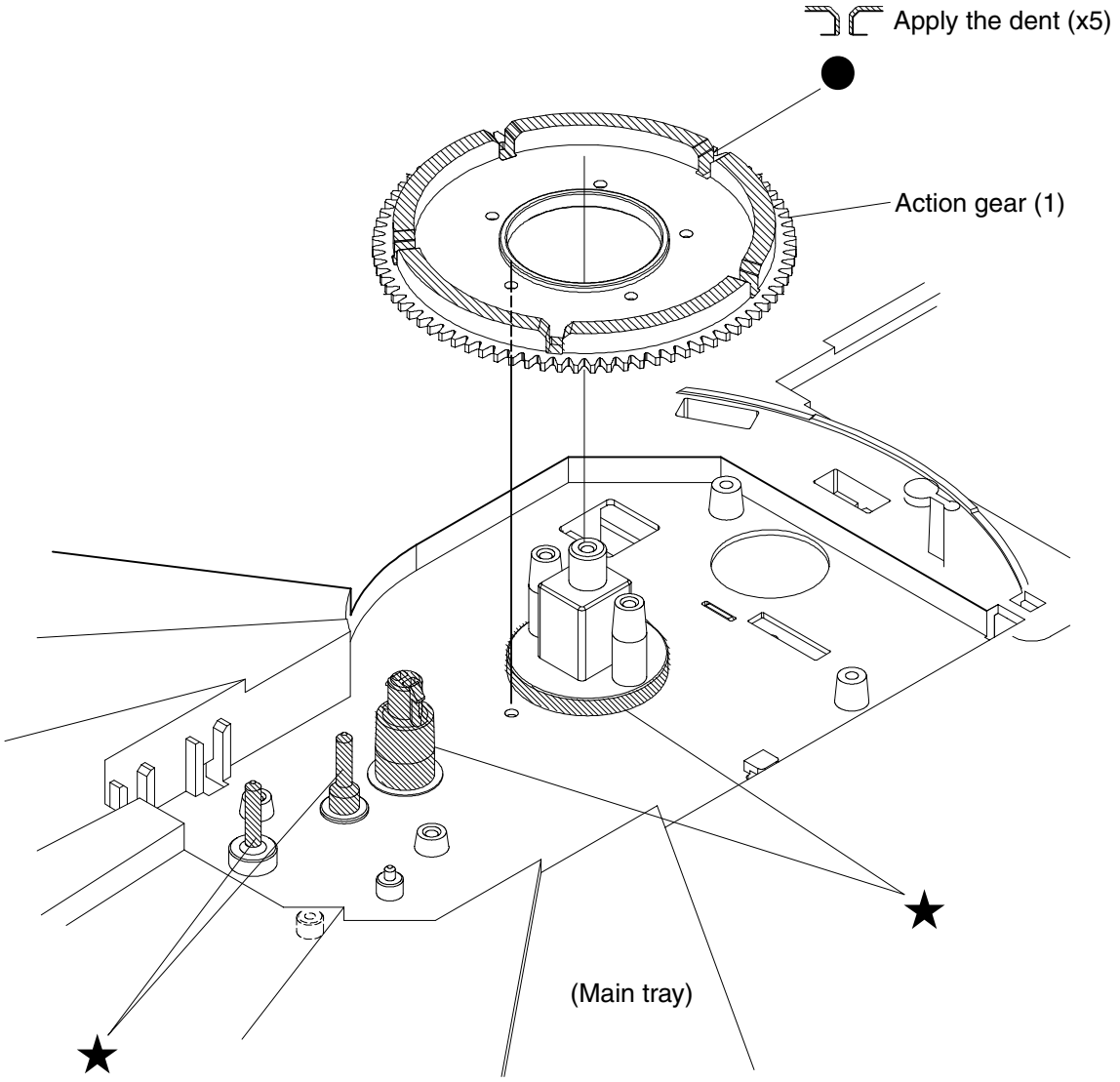




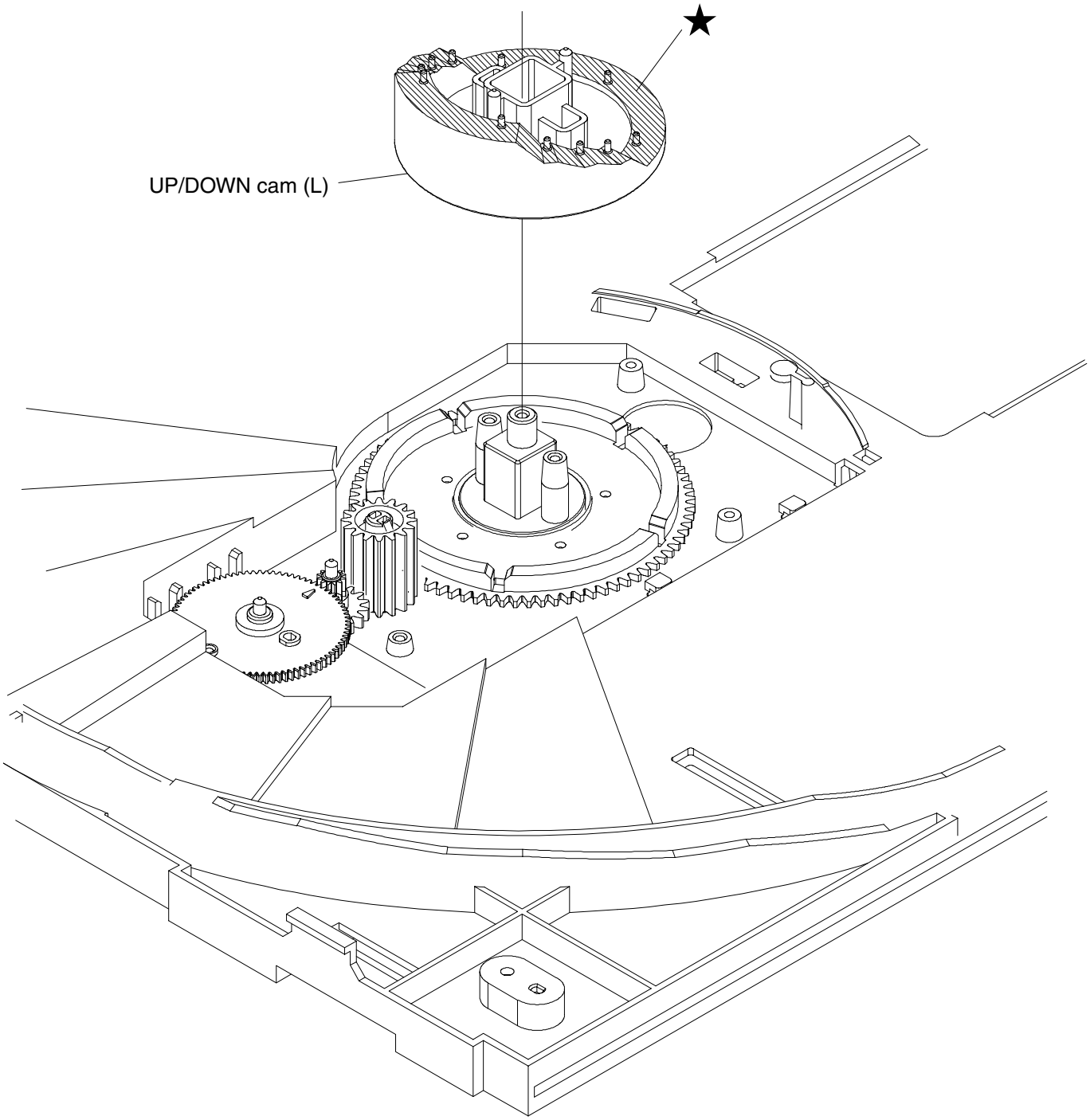

Grease
★ = EM-30L-1
● = FL-7750
Apply the top surface of rib
Back view
NOTE : ⟷ Area, there are not excess grease on surface.(appearance side)
Main tray cover


Grease
● = FL-7750
★ = EM-30L-1
Both side
Apply top surface of rib
Apply top surface of rib
Apply convex part
Grease is painted internally in the ditch.
Main tray
Both side

Grease
★ = EM-30L-1
● = FL-7750

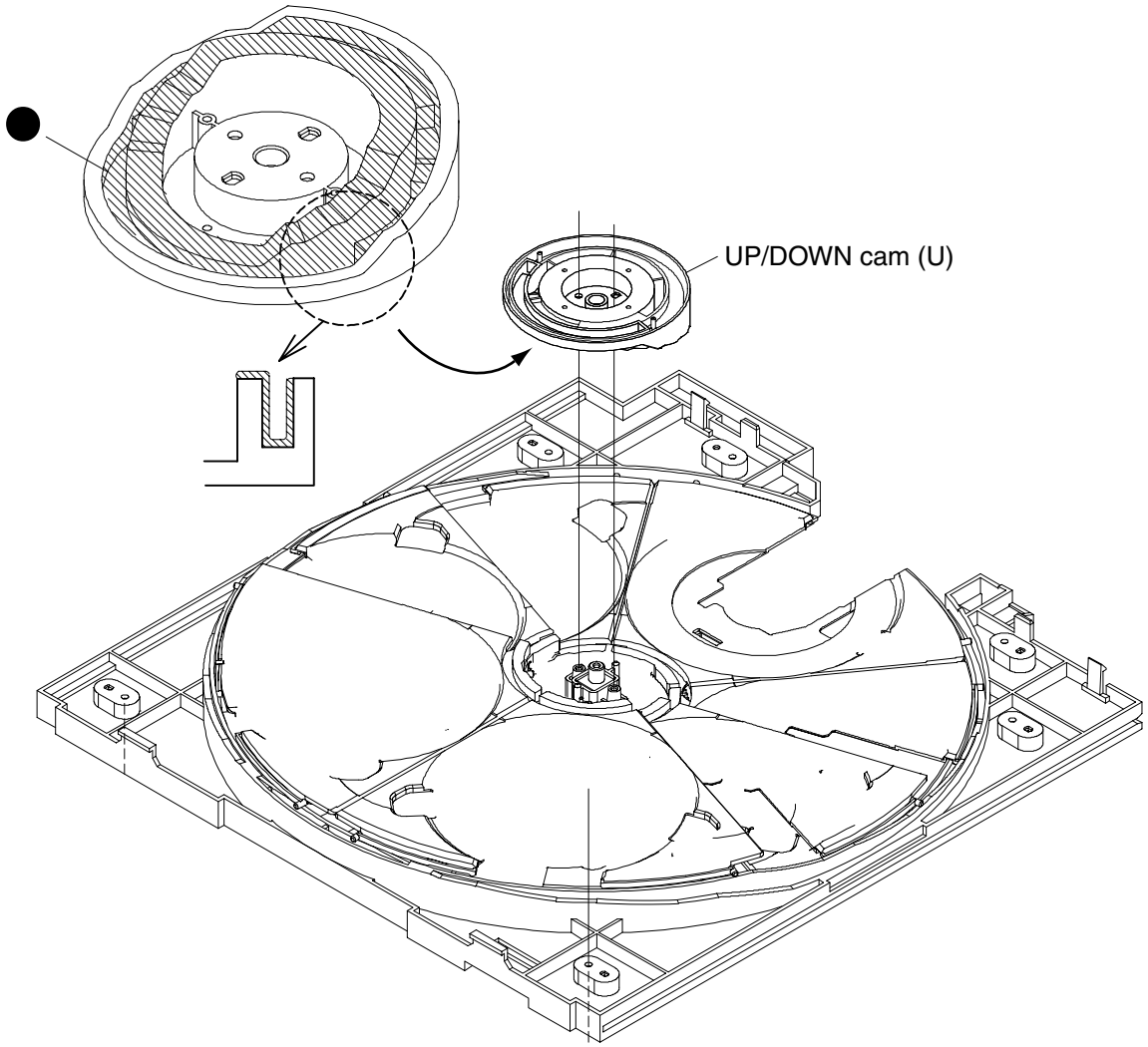


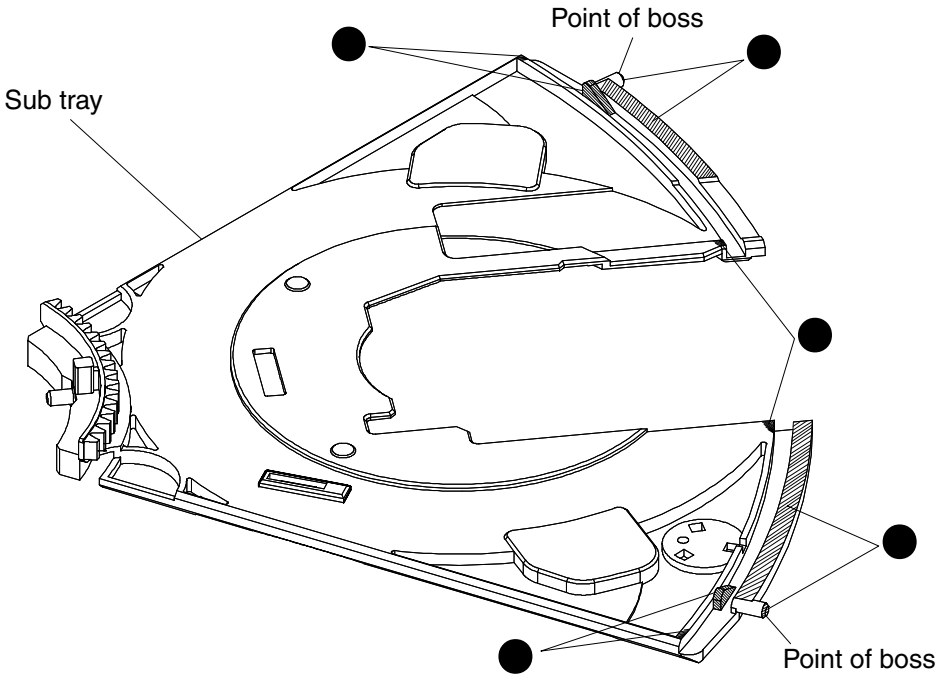
Grease
★ = EM-30L-1



Grease

● = FL-7750





■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 201	NCB30JK-474X	C CAPACITOR		
	C 204	NCB31HK-331X	C CAPACITOR		
	C 205	NCS31HJ-121X	C CAPACITOR		
	C 206	NCS31HJ-271X	C CAPACITOR		
	C 207	NCB31HK-471X	C CAPACITOR		
	C 208	NCB31CK-104X	C CAPACITOR		
	C 209	NCB31HK-102X	C CAPACITOR		
	C 210	NCB31HK-102X	C CAPACITOR		
	C 213	NCB31CK-104X	C CAPACITOR		
	C 214	NCB31CK-104X	C CAPACITOR		
	C 215	NEA70JM-336X	E CAPACITOR		
	C 216	NCB30JK-105X	C CAPACITOR		
	C 217	NEA70JM-107X	E.CAPACITOR		
	C 218	NCB31CK-104X	C CAPACITOR		
	C 219	NEA70JM-107X	E.CAPACITOR		
	C 220	NCB30JK-105X	C CAPACITOR		
	C 221	NCB31HK-561X	C CAPACITOR		
	C 222	NCB31CK-104X	C CAPACITOR		
	C 223	NCB31CK-104X	C CAPACITOR		
	C 224	NCB31CK-104X	C CAPACITOR		
	C 225	NBE91CM-105X	E CAPACITOR	TANTAL	
	C 227	NCB31HK-102X	C CAPACITOR		
	C 228	NCB31HK-102X	C CAPACITOR		
	C 229	NCB31CK-104X	C CAPACITOR		
	C 231	NCB31EK-103X	C.CAPA. C.M		
	C 232	NCB31HK-102X	C CAPACITOR		
	C 233	NCB31CK-104X	C CAPACITOR		
	C 237	NCB31CK-104X	C CAPACITOR		
	C 238	NCB31CK-104X	C CAPACITOR		
	C 239	NCB31CK-183X	C CAPACITOR		
	C 240	NCS31HJ-101X	C.CAPA. C.M		
	C 241	NCB31CK-103X	C CAPACITOR		
	C 242	NCB30JK-105X	C CAPACITOR		
	C 244	NCB31CK-104X	C CAPACITOR		
	C 245	NCB31CK-103X	C CAPACITOR		
	C 246	NCB31CK-104X	C CAPACITOR		
	C 247	NCB31CK-104X	C CAPACITOR		
	C 251	NCB31CK-104X	C CAPACITOR		
	C 252	NEA70JM-226X	E CAPACITOR		
	C 301	NCB31CK-104X	C CAPACITOR		
	C 302	NCB31CK-104X	C CAPACITOR		
	C 303	NCB31CK-104X	C CAPACITOR		
	C 304	NCB31CK-104X	C CAPACITOR		
	C 305	NCB31CK-104X	C CAPACITOR		
	C 306	NCB31CK-104X	C CAPACITOR		
	C 307	NCB31CK-104X	C CAPACITOR		
	C 309	NCB31CK-104X	C CAPACITOR		
	C 310	NCB31CK-104X	C CAPACITOR		
	C 311	NCB31CK-104X	C CAPACITOR		
	C 312	NCS31HJ-180X	C CAPACITOR		
	C 313	NCS31HJ-180X	C CAPACITOR		
	C 314	NCB31CK-104X	C CAPACITOR		
	C 315	NCB31CK-104X	C CAPACITOR		
	C 316	NEA70GM-107X	E CAPACITOR		
	C 317	NCB30JK-105X	C CAPACITOR		
	C 318	NCB31CK-104X	C CAPACITOR		
	C 319	NCB31CK-104X	C CAPACITOR		
	C 320	NCB31CK-104X	C CAPACITOR		
	C 321	NCB31CK-104X	C CAPACITOR		
	C 324	NCB31CK-104X	C CAPACITOR		
	C 326	NCB31CK-104X	C CAPACITOR		
	C 327	NEA70GM-107X	E CAPACITOR		
	C 401	NCB31CK-104X	C CAPACITOR		
	C 402	NCB31CK-104X	C CAPACITOR		
	C 405	NCB31CK-104X	C CAPACITOR		
	C 406	NCB31CK-104X	C CAPACITOR		
	C 407	NCB31CK-104X	C CAPACITOR		
	C 408	NEA70JM-226X	E CAPACITOR		
	C 409	NCB31CK-104X	C CAPACITOR		
	C 412	NCB31CK-104X	C CAPACITOR		
	C 451	NCB31CK-104X	C CAPACITOR		
	C 452	NEA71CM-476X	E CAPACITOR		
	C 453	NCB31CK-104X	C CAPACITOR		
	C 454	NEA71CM-476X	E CAPACITOR		
	C 455	NEA71HM-105X	E.CAPA. C.M.		
	C 501	NCB31CK-104X	C CAPACITOR		
	C 502	NCB31CK-104X	C CAPACITOR		
	C 503	NCB31CK-104X	C CAPACITOR		
	C 509	NCB31CK-104X	C CAPACITOR		
	C 510	NCB31CK-104X	C CAPACITOR		
	C 511	NEA70JM-226X	E CAPACITOR		
	C 512	NCB31CK-104X	C CAPACITOR		
	C 513	NCB31CK-104X	C CAPACITOR		
	C 514	NCB31CK-104X	C CAPACITOR		
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	C 520	NCB31CK-104X	C CAPACITOR		
	C 523	NCB31CK-104X	C CAPACITOR		
	C 524	NEA70JM-226X	E CAPACITOR		
	C 525	NCB31CK-104X	C CAPACITOR		
	C 526	NCB31CK-104X	C CAPACITOR		
	C 527	NEA70JM-107X	E.CAPACITOR		
	C 528	NCB31CK-104X	C CAPACITOR		
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	C 547	NCB31CK-104X	C CAPACITOR		
	C 548	NCB31CK-104X	C CAPACITOR		
	C 549	NEA70JM-227X	E CAPACITOR		
	C 550	NCB31EK-104X	C CAPACITOR		
	C 551	NEA70JM-227X	E CAPACITOR		
	C 554	NCB31CK-104X	C CAPACITOR		
	C 555	NCB31CK-104X	C CAPACITOR		
	C 556	NCB30JK-105X	C CAPACITOR		
	C 557	NCB31CK-104X	C CAPACITOR		
	C 562	NCB31CK-104X	C CAPACITOR		
	C 564	NEA70JM-226X	E CAPACITOR		
	C 565	NEA70JM-226X	E CAPACITOR		
	C 568	NEA70JM-226X	E CAPACITOR		
	C 569	NCB31CK-104X	C CAPACITOR		
	C 570	NCB31CK-104X	C CAPACITOR		
	C 571	NEA70JM-226X	E CAPACITOR		
	C 572	NCB31CK-104X	C CAPACITOR		
	C 573	NEA70JM-227X	E CAPACITOR		
	C 574	NCB31CK-104X	C CAPACITOR		
	C 578	NCB31CK-104X	C CAPACITOR		
	C 580	NEA70JM-226X	E CAPACITOR		
	C 581	NEX50GM-107X	E CAPACITOR.		

■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 582	NEA70JM-226X	E CAPACITOR		
	C 585	NCB31CK-104X	C CAPACITOR		
	C 586	NCB31CK-104X	C CAPACITOR		
	C 587	NCB31CK-104X	C CAPACITOR		
	C 588	NCB31CK-104X	C CAPACITOR		
	C 589	NCB31CK-104X	C CAPACITOR		
	C 590	NCB31CK-104X	C CAPACITOR		
	C 591	NCB31CK-104X	C CAPACITOR		
	C 592	NCB31CK-104X	C CAPACITOR		
	C 593	NCB31CK-104X	C CAPACITOR		
	C 594	NCB31CK-104X	C CAPACITOR		
	C 595	NCB31CK-104X	C CAPACITOR		
	C 596	NCB31CK-104X	C CAPACITOR		
	C 597	NEA70JM-226X	E CAPACITOR		
	C 598	NCB31CK-104X	C CAPACITOR		
	C 599	NCB31CK-104X	C CAPACITOR		
	C 605	NEA70JM-107X	E.CAPACITOR		
	C 606	NCB31CK-104X	C CAPACITOR		
	C 607	NEA70JM-107X	E.CAPACITOR		
	C 608	NEA70JM-107X	E.CAPACITOR		
	C 609	NEA70JM-107X	E.CAPACITOR		
	C 610	NEA70JM-107X	E.CAPACITOR		
	C 611	NCB31CK-104X	C CAPACITOR		
	C 612	NEA71EM-475X	E.CAPACITOR.		
	C 613	NEA71EM-475X	E.CAPACITOR.		
	C 614	NEA70JM-107X	E.CAPACITOR		
	C 615	NEA70JM-107X	E.CAPACITOR		
	C 616	NCF21CZ-155X	C CAPACITOR		
	C 623	NEA70JM-476X	E.CAPACITOR		
	C 624	NEA70JM-476X	E.CAPACITOR		
	C 625	NEA70JM-476X	E.CAPACITOR		
	C 626	NEA70JM-476X	E.CAPACITOR		
	C 627	NEA70JM-476X	E.CAPACITOR		
	C 801	NEA71CM-107X	E CAPACITOR		
	C 802	NCB31CK-104X	C CAPACITOR		
	C 803	NEA71CM-107X	E CAPACITOR		
	C 804	NCB31HK-331X	C CAPACITOR		
	C 805	NCB31HK-471X	C CAPACITOR		
	C 808	NCB31CK-223X	C CAPACITOR		
	C 809	NCB31CK-103X	C CAPACITOR		
	C 812	NCB31CK-104X	C CAPACITOR		
	C 813	NEA70JM-476X	E.CAPACITOR		
	C 931	NEA70JM-226X	E CAPACITOR		
	C 932	NCB31CK-104X	C CAPACITOR		
	C 933	NEX50JM-156X	E.CAPA.C.M		
	C 934	NCB31CK-104X	C CAPACITOR		
	C 941	NCB31CK-104X	C CAPACITOR		
	C 942	NCB31CK-104X	C CAPACITOR		
	C 943	NCB31CK-104X	C CAPACITOR		
	C 944	NCB31CK-102X	C CAPACITOR		
	C 945	NCB31CK-104X	C CAPACITOR		
	CN210	QGF0503C1-40V	CONNECTOR	HA-MAIN	
	CN601	QGB1218J2-18X	B TO B CONNECTOR	MAIN-AUDIO	
	CN602	QGB1218J2-18X	B TO B CONNECTOR	MAIN-AUDIO	
	CN801	QGF1016C2-13W	FFC/FPC CONNECTOR	MAIN-FRONT	
	CN803	QGF0503C1-40V	CONNECTOR	MAIN-FRONT	
	CN807	QGA2001F2-08X	SOCKET	PS-MAIN	
	CN808	QGA2001C2-06X	W TO B CONNECTOR	MAIN-LOADER	
	CN809	QGA2001C2-03X	W TO B CONNECTOR	MAIN-LOADER	
	CN810	QGA2001C2-09X	FFC/FPC CONNECTOR	MAIN-LOADER	
	CN901	QGA2001F2-13X	CONNECTOR C.M	PS-MAIN	
	D 451	1SS355-X	DIODE C.M		
	D 452	1SS355-X	DIODE C.M		
	D 453	1SS355-X	DIODE C.M		
	D 454	1SS355-X	DIODE C.M		
	D 455	UDZS9.1B-X	Z DIODE		
	D 456	1SS355-X	DIODE C.M		

⚠	Item	Parts number	Parts name	Remarks	Area
	D 614	1SS355-X	DIODE C.M		
	D 615	1SS355-X	DIODE C.M		
	D 801	1SS355-X	DIODE C.M		
	D 802	1SS355-X	DIODE C.M		
	D 803	1SS355-X	DIODE C.M		
	IC201	MN67706ZY	IC	ADSC	
	IC301	MN103S13BDA	IC	ODC	
	IC401	MN102L25GGW	IC C.M		
	IC403	AK93C65AF-X	IC	EEPROM	
	IC451	BA6287F-X	IC		
	IC452	BA6287F-X	IC		
	IC501	NDV8601VWA-BB	IC		
	IC502	NAX0265-001X	IC		
	IC505	K4S643232E-TC60	IC		
	IC509	SST39VF160-7CEK	IC		
	IC510	AK93C65AF-X	IC		
	IC511	LM1117MP1.8-X	IC		
	IC512	74LCX373MTC-X	IC(DIGITAL)		
	IC513	74LCX373MTC-X	IC(DIGITAL)		
	IC516	MM74HCT32MTC-X	IC		
	IC517	74LCX32MTC-X	IC(DIGITAL)		
	IC518	NC7SZ125P5-X	IC(DIGITAL)		
	IC601	BA7660FS-X	V.BUFFER		
	IC602	BA7665FS-X	V.BUFFER		
	IC801	UPD780232GC-055	IC MICON		
	IC802	NJU3715G-W	IC		
	IC803	IC-PST574M/C/-W	IC		
	K 201	NQR0007-002X	FERRITE BEADS		
	K 202	NQR0007-002X	FERRITE BEADS		
	K 203	NQR0007-002X	FERRITE BEADS		
	K 301	NQR0007-002X	FERRITE BEADS		
	K 302	NQR0007-002X	FERRITE BEADS		
	K 303	NQR0007-002X	FERRITE BEADS		
	K 402	NQR0007-002X	FERRITE BEADS		
	K 501	NQR0007-002X	FERRITE BEADS		
	K 504	NQR0007-002X	FERRITE BEADS		
	K 505	NQR0007-002X	FERRITE BEADS		
	K 506	NQR0007-002X	FERRITE BEADS		
	K 508	NQR0007-002X	FERRITE BEADS		
	K 509	NQR0007-002X	FERRITE BEADS		
	K 510	NQR0007-002X	FERRITE BEADS		
	K 513	NQR0007-002X	FERRITE BEADS		
	K 516	NQR0007-002X	FERRITE BEADS		
	K 519	NQR0007-002X	FERRITE BEADS		
	L 201	NQL044K-100X	INDUCTOR		
	L 202	NQL044K-100X	INDUCTOR		
	L 501	NQL12BK-100X	MURATA COIL		
	L 502	NQL12BK-100X	MURATA COIL		
	L 601	NQR0461-001X	FILTER I.M		
	L 602	NQR0460-001X	LPF		
	L 603	NQR0460-001X	LPF		
	L 604	NQR0460-001X	LPF		
	L 801	NQL044M-2R2X	INDUCTOR.C.M.		
	Q 401	DTC114EE-X	TRANSISTOR		
	Q 402	DTC114EE-X	TRANSISTOR		
	Q 451	2SC4081/QR/-X	TRANSISTOR		
	Q 452	2SC4081/QR/-X	TRANSISTOR		
	Q 501	2SB1424/QR/-X	TRANSISTOR		
	Q 502	2SC2412K/RS/-X	CHIP TRANSISTOR		
	Q 607	DTA114EE-X	DIGITAL.TR		
	Q 608	DTA114EE-X	DIGITAL.TR		
	Q 801	DTC114YKA-X	CHIP D.TRANSISTOR		
	Q 901	KTC4377/C/-X	POW TRANSISTOR		
	R 202	NRSA63J-473X	MG RESISTOR		
	R 205	NRSA63J-473X	MG RESISTOR		
	R 206	NRS125J-4R7X	MG RESISTOR		

■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 208	NRSA63J-473X	MG RESISTOR		
	R 209	NRSA63J-123X	MG RESISTOR		
	R 210	NRSA63J-473X	MG RESISTOR		
	R 211	NRSA63J-273X	MG RESISTOR		
	R 212	NRSA63J-273X	MG RESISTOR		
	R 213	NRSA63J-562X	MG RESISTOR		
	R 214	NRSA63J-123X	MG RESISTOR		
	R 215	NRSA63J-105X	MG RESISTOR		
	R 218	NRSA63J-153X	MG RESISTOR		
	R 219	NRSA63J-473X	MG RESISTOR		
	R 220	NRSA63J-473X	MG RESISTOR		
	R 223	NRSA63J-473X	MG RESISTOR		
	R 226	NRSA63J-123X	MG RESISTOR		
	R 227	NRSA63J-102X	MG RESISTOR		
	R 229	NRSA63J-273X	MG RESISTOR		
	R 230	NRSA63J-273X	MG RESISTOR		
	R 231	NRSA63J-0R0X	MG RESISTOR		
	R 233	NRSA63J-472X	MG RESISTOR		
	R 234	NRSA63J-472X	MG RESISTOR		
	R 235	NRSA63J-272X	MG RESISTOR		
	R 236	NRSA63J-0R0X	MG RESISTOR		
	R 237	NRSA63J-221X	MG RESISTOR		
	R 238	NRSA63J-221X	MG RESISTOR		
	R 239	NRSA63J-221X	MG RESISTOR		
	R 240	NRSA63J-221X	MG RESISTOR		
	R 241	NRSA63J-221X	MG RESISTOR		
	R 242	NRSA63J-102X	MG RESISTOR		
	R 243	NRSA63J-102X	MG RESISTOR		
	R 245	NRSA63J-102X	MG RESISTOR		
	R 246	NRSA63J-102X	MG RESISTOR		
	R 248	NRSA63J-473X	MG RESISTOR		
	R 249	NRSA63J-473X	MG RESISTOR		
	R 250	NRSA63J-473X	MG RESISTOR		
	R 255	NRSA63J-103X	MG RESISTOR		
	R 256	NRSA63J-103X	MG RESISTOR		
	R 278	NRSA63J-103X	MG RESISTOR		
	R 279	NRSA63J-103X	MG RESISTOR		
	R 285	NRSA63J-103X	MG RESISTOR		
	R 294	NRSA63J-0R0X	MG RESISTOR		
	R 295	NRSA63J-0R0X	MG RESISTOR		
	R 301	NRSA63J-473X	MG RESISTOR		
	R 302	NRSA63J-473X	MG RESISTOR		
	R 303	NRSA63J-473X	MG RESISTOR		
	R 304	NRSA63J-473X	MG RESISTOR		
	R 305	NRSA63J-473X	MG RESISTOR		
	R 306	NRSA63J-473X	MG RESISTOR		
	R 307	NRSA63J-473X	MG RESISTOR		
	R 308	NRSA63J-473X	MG RESISTOR		
	R 309	NRSA63J-103X	MG RESISTOR		
	R 310	NRSA63J-102X	MG RESISTOR		
	R 311	NRSA63J-102X	MG RESISTOR		
	R 316	NRSA63J-105X	MG RESISTOR		
	R 317	NRSA63J-0R0X	MG RESISTOR		
	R 318	NRSA63J-0R0X	MG RESISTOR		
	R 322	NRSA63J-473X	MG RESISTOR		
	R 324	NRSA63J-473X	MG RESISTOR		
	R 328	NRSA63J-473X	MG RESISTOR		
	R 345	NRSA63J-562X	MG RESISTOR		
	R 346	NRSA63J-472X	MG RESISTOR		
	R 347	NRSA63J-102X	MG RESISTOR		
	R 348	NRSA63J-102X	MG RESISTOR		
	R 349	NRSA63J-102X	MG RESISTOR		
	R 350	NRSA63J-102X	MG RESISTOR		
	R 364	NRSA63J-0R0X	MG RESISTOR		
	R 403	NRSA63J-472X	MG RESISTOR		
	R 405	NRSA63J-472X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R 408	NRSA63J-472X	MG RESISTOR		
	R 411	NRSA63J-472X	MG RESISTOR		
	R 412	NRSA63J-222X	MG RESISTOR		
	R 413	NRSA63J-472X	MG RESISTOR		
	R 414	NRSA63J-472X	MG RESISTOR		
	R 415	NRSA63J-472X	MG RESISTOR		
	R 416	NRSA63J-472X	MG RESISTOR		
	R 417	NRSA63J-472X	MG RESISTOR		
	R 418	NRSA63J-472X	MG RESISTOR		
	R 421	NRSA63J-0R0X	MG RESISTOR		
	R 431	NRSA63J-0R0X	MG RESISTOR		
	R 441	NRSA63J-472X	MG RESISTOR		
	R 442	NRSA63J-472X	MG RESISTOR		
	R 443	NRSA63J-332X	MG RESISTOR		
	R 451	NRSA63J-331X	MG RESISTOR		
	R 452	NRS125J-R47X	MG RESISTOR		
	R 453	NRSA63J-121X	MG RESISTOR		
	R 454	NRS125J-R47X	MG RESISTOR		
	R 455	NRSA63J-751X	MG.RES C.M		
	R 456	NRSA63J-103X	MG RESISTOR		
	R 457	NRSA63J-183X	MG RESISTOR		
	R 501	NRSA63J-221X	MG RESISTOR		
	R 503	NRSA63J-103X	MG RESISTOR		
	R 504	NRSA63J-103X	MG RESISTOR		
	R 509	NRSA63J-333X	MG RESISTOR		
	R 510	NRSA63J-102X	MG RESISTOR		
	R 511	NRSA63J-0R0X	MG RESISTOR		
	R 512	NRSA63J-0R0X	MG RESISTOR		
	R 513	NRSA63J-152X	MG RESISTOR		
	R 531	NRSA63J-562X	MG RESISTOR		
	R 532	NRSA63J-392X	MG RESISTOR		
	R 533	NRSA63J-102X	MG RESISTOR		
	R 534	NRSA63J-561X	MG RESISTOR		
	R 535	NRSA63J-0R0X	MG RESISTOR		
	R 536	NRSA63J-0R0X	MG RESISTOR		
	R 537	NRSA63J-0R0X	MG RESISTOR		
	R 538	NRSA63J-0R0X	MG RESISTOR		
	R 539	NRSA63J-0R0X	MG RESISTOR		
	R 540	NRSA63J-0R0X	MG RESISTOR		
	R 541	NRSA63J-0R0X	MG RESISTOR		
	R 542	NRSA63J-0R0X	MG RESISTOR		
	R 543	NRSA63J-0R0X	MG RESISTOR		
	R 544	NRSA63J-0R0X	MG RESISTOR		
	R 545	NRSA63J-0R0X	MG RESISTOR		
	R 546	NRSA63J-0R0X	MG RESISTOR		
	R 548	NRSA63J-0R0X	MG RESISTOR		
	R 549	NRSA63J-0R0X	MG RESISTOR		
	R 550	NRSA63J-0R0X	MG RESISTOR		
	R 551	NRSA63J-0R0X	MG RESISTOR		
	R 552	NRSA63J-0R0X	MG RESISTOR		
	R 553	NRSA63J-0R0X	MG RESISTOR		
	R 557	NRSA63J-332X	MG RESISTOR		
	R 558	NRSA63J-0R0X	MG RESISTOR		
	R 559	NRSA63J-0R0X	MG RESISTOR		
	R 560	NRSA63J-0R0X	MG RESISTOR		
	R 561	NRSA63J-0R0X	MG RESISTOR		
	R 562	NRSA63J-0R0X	MG RESISTOR		
	R 563	NRSA63J-0R0X	MG RESISTOR		
	R 565	NRVA63D-472X	CMF RESISTOR		
	R 566	NRVA63D-152X	RESIS C.M		
	R 567	NRVA63D-820X	RES. C.M		
	R 568	NRVA63D-750X	RES. C.M		
	R 569	NRVA63D-750X	RES. C.M		
	R 570	NRSA63J-100X	MG RESISTOR		
	R 572	NRVA63D-750X	RES. C.M		
	R 573	NRSA63J-162X	MG RESISTOR		

■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 574	NRSA63J-162X	MG RESISTOR		
	R 575	NRSA63J-101X	MG RESISTOR		
	R 576	NRSA63J-750X	MG RESISTOR		
	R 578	NRSA63J-151X	MG RESISTOR		
	R 579	NRSA63J-151X	MG RESISTOR		
	R 580	NRSA63J-151X	MG RESISTOR		
	R 583	NRSA63J-271X	MG RESISTOR		
	R 590	NRSA63J-220X	MG RESISTOR		
	R 596	NRSA63J-750X	MG RESISTOR		
	R 597	NRSA63J-0R0X	MG RESISTOR		
	R 601	NRSA63J-222X	MG RESISTOR		
	R 602	NRSA63J-750X	MG RESISTOR		
	R 604	NRSA63J-820X	MG RESISTOR		
	R 605	NRSA63J-102X	MG RESISTOR		
	R 606	NRSA63J-750X	MG RESISTOR		
	R 607	NRSA63J-102X	MG RESISTOR		
	R 608	NRSA63J-750X	MG RESISTOR		
	R 621	NRSA63J-0R0X	MG RESISTOR		
	R 622	NRSA63J-0R0X	MG RESISTOR		
	R 801	NRSA63J-103X	MG RESISTOR		
	R 802	NRSA63J-103X	MG RESISTOR		
	R 803	NRSA63J-101X	MG RESISTOR		
	R 831	NRSA63J-222X	MG RESISTOR		
	R 832	NRSA63J-222X	MG RESISTOR		
	R 833	NRSA63J-222X	MG RESISTOR		
	R 834	NRSA63J-222X	MG RESISTOR		
	R 835	NRSA63J-431X	MG RESISTOR		
	R 836	NRSA63J-152X	MG RESISTOR		
	R 837	NRSA63J-222X	MG RESISTOR		
	R 840	NRSA63J-103X	MG RESISTOR		
	R 842	NRSA63J-561X	MG RESISTOR		
	R 843	NRSA63J-103X	MG RESISTOR		
	R 846	NRSA63J-103X	MG RESISTOR		
	R 847	NRSA63J-103X	MG RESISTOR		
	R 851	NRSA63J-103X	MG RESISTOR		
	R 852	NRSA63J-103X	MG RESISTOR		
	R 853	NRSA63J-103X	MG RESISTOR		
	R 854	NRSA63J-103X	MG RESISTOR		
	R 855	NRSA63J-103X	MG RESISTOR		
	R 856	NRSA63J-103X	MG RESISTOR		
	R 857	NRSA63J-103X	MG RESISTOR		
	R 858	NRSA63J-103X	MG RESISTOR		
	R 891	NRSA02J-0R0X	MG RESISTOR		
	R 892	NRSA02J-0R0X	MG RESISTOR		
	R 893	NRSA02J-0R0X	MG RESISTOR		
	R 894	NRSA02J-0R0X	MG RESISTOR		
	R 931	NRSA63J-0R0X	MG RESISTOR		
	X 301	NAX0375-001X	CRYSTAL	16.9344MHZ	
	X 401	NAX0291-001X	C OSCILLATOR	10MHZ	
	X 801	NAX0482-001X	RESONATOR I.M		

■ Electrical parts list (Main board)

Block No. 02

⚠	Item	Parts number	Parts name	Remarks	Area
	BK761	E409182-001SM	GRAND TERMINAL		
⚠	C 902	QFZ9067-683	M CAPACITOR		
⚠	C 903	QFZ9067-683	M CAPACITOR		
⚠	C 905	QCZ9079-102	C CAPACITOR	1000PF	85J
⚠	C 906	QCZ9079-102	C CAPACITOR	1000PF	85J
⚠	C 907	QETM2DM-157	E CAPACITOR	J/C/DOM	
	C 908	QCZ0136-332Z	C CAPACITOR	3300PF	85J
	C 909	QCZ0136-101Z	C CAPACITOR	100PF	85J
	C 910	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 913	QCZ0136-101Z	C CAPACITOR	100PF	85J
	C 914	QEZ0532-396Z	E CAPACITOR	39MF	
	C 915	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
	C 917	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C 918	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C 919	QCZ0136-101Z	C CAPACITOR	100PF	85J
	C 951	QCZ0136-101Z	C CAPACITOR	100PF	
	C 960	QEZ0529-826Z	E CAPACITOR	82MF	
	C 961	QFVC1HJ-104Z	M.M.CAPACITOR	.10MF 5% 50V	
	C 962	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 963	QEZ0533-396Z	E CAPACITOR	39MF	
	C 964	QFVC1HJ-104Z	M.M.CAPACITOR	.10MF 5% 50V	
	C 965	QEZ0528-108	E CAPACITOR	1000MF	
	C 966	QETN1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 967	QFVC1HJ-104Z	M.M.CAPACITOR	.10MF 5% 50V	
	C 968	QFVC1HJ-104Z	M.M.CAPACITOR	.10MF 5% 50V	
	C 969	QETN1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 970	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 971	QEMW1AM-108	E CAPACITOR	1000MF 20% 10V	
	C 972	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V	
	C 973	QFVC1HJ-104Z	M.M.CAPACITOR	.10MF 5% 50V	
	C 978	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 979	QEZ0530-827	E CAPACITOR	820MF	
	C 981	QFVC1HJ-104Z	M.M.CAPACITOR	.10MF 5% 50V	
	C 982	QEMW1EM-108	E CAPACITOR	1000MF 20% 25V	
	C 984	QETN1EM-477Z	E CAPACITOR	470MF 20% 25V	
	C 987	QETN1EM-477Z	E CAPACITOR	470MF 20% 25V	
	C 989	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 992	QETN1HM-474Z	E CAPACITOR	.47MF 20% 50V	
	C 993	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 994	QDVB1EZ-223Y	C CAPACITOR		
	C 995	QETN1CM-227Z	E CAPACITOR	220MF 20% 16V	
	C 996	QETN1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 997	QETN1CM-227Z	E CAPACITOR	220MF 20% 16V	
	C1101	QFLC1HJ-272Z	M.CAPA. I.M	2700PF 5% 50V	
	C1102	QFLC1HJ-272Z	M.CAPA. I.M	2700PF 5% 50V	
	C1103	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1104	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1105	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1106	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1107	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1108	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1109	QFP31HJ-103Z	PP CAPACITOR	.010MF 5% 50V	
	C1110	QFP31HJ-103Z	PP CAPACITOR	.010MF 5% 50V	
	C1111	QFN31HJ-681Z	M.CAPA. I.M	680PF 5% 50V	
	C1112	QFN31HJ-681Z	M.CAPA. I.M	680PF 5% 50V	
	C1113	QFN31HJ-332Z	M CAPACITOR	3300PF 5% 50V	
	C1114	QFN31HJ-332Z	M CAPACITOR	3300PF 5% 50V	
	C1115	QFP31HJ-221Z	PP CAPACITOR	220PF 5% 50V	
	C1116	QFP31HJ-221Z	PP CAPACITOR	220PF 5% 50V	
	C1117	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V	
	C1118	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V	
	C1119	QTE0J28-108X	E.CAPA I/M		
	C1120	QTE0J28-108X	E.CAPA I/M		
	C1121	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1122	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1123	QCZ0202-155Z	ML C CAPA I/M	1.5MF	

⚠	Item	Parts number	Parts name	Remarks	Area
	C1124	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1125	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C1126	QFVJ1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C1127	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V	
	C1128	QFLC1HJ-152Z	M CAPACITOR	1500PF 5% 50V	
	C1135	QFN31HJ-681Z	M.CAPA. I.M	680PF 5% 50V	
	C1136	QFN31HJ-681Z	M.CAPA. I.M	680PF 5% 50V	
	C1151	QTE1C28-476Z	E CAPACITOR		
	C1152	QFVJ1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1153	QFVJ1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1161	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1162	QTE1E28-476Z	E CAPACITOR		
	C1163	QCBB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C1164	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C1165	QDVB1EZ-223Y	C CAPACITOR		
	C1166	QTE1A28-107Z	E CAPACITOR		
	C1167	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C1181	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C1193	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	CN604	QGB1218K2-18	CONNECTOR		
	CN605	QGB1218K2-18	CONNECTOR		
	CN751	QGB1218J1-18	CONNECTOR		
	CN752	QGB1218J1-18	CONNECTOR		
	CN755	QGB1218K2-18	CONNECTOR		
	CN756	QGB1218K2-18	CONNECTOR		
	CN841	QGF1031C1-09S	FFC/FPC CONNECTOR		
	CN842	QGA2001F1-09	9P SOCKET		
	CN951	QGF1016C1-11	CONNECTOR		
	CN952	QGA2001F1-08	CONNECTOR		
	CN953	QGA2001F1-13	CONNECTOR		
⚠	CP951	ICP-N10-T	ICP		
⚠	D 901	S1WB/A/60-4101	BRIDGE DIODE		
⚠	D 902	ERA18-04-T1	FR DIODE		
⚠	D 903	ERA18-04-T1	FR DIODE		
⚠	D 904	ERA18-04-T1	FR DIODE		
⚠	D 908	ERA18-04-T1	FR DIODE		
⚠	D 910	ERA18-04-T1	FR DIODE		
	D 911	1SS133-T2	SI DIODE IM		
⚠	D 950	ERA18-04-T1	FR DIODE		
⚠	D 951	ERA18-04-T1	FR DIODE		
⚠	D 952	ERA18-04-T1	FR DIODE		
⚠	D 953	FMB-24	FUSEIODE		
⚠	D 954	ERA18-04-T1	FR DIODE		
⚠	D 956	ERA18-04-T1	FR DIODE		
⚠	D 957	ERA18-04-T1	FR DIODE		
⚠	D 958	FMB-24	FUSEIODE		
	D 960	MTZJ4.7B-T2	Z DIODE I M		
	D 972	1SS133-T2	SI DIODE IM		
	D 973	1SS133-T2	SI DIODE IM		
	D 974	1SS133-T2	SI DIODE IM		
	D 991	MTZJ5.1C-T2	ZENER DIODE		
	D1161	MTZJ3.3B-T2	ZENER DIODE IM		
	FC901	QNG0003-001Z	FUSE CLIP		
	FC902	QNG0003-001Z	FUSE CLIP		
	HS901	E70306-002	HEAT SINK		
	HS952	E70306-002	HEAT SINK		
	IC751	NJM4580L	IC		
	IC752	NJM4580L	IC		
	IC753	MN35505-X	IC C M		
	IC754	TC74HC08AP	IC		
	IC755	NJM78L05A-T	IC I.M		
⚠	IC901	STR-G6651	IC		
	IC951	PQ05RD21	IC		
	IC952	SI-3033C	IC		
	J 751	QNN0468-001	OPT TRANSMITTER		
	J 752	QNN0466-001	PIN JACK	COAX D.OUT	

Explanation of area column
85J =XV-F85GD ver.J

■ **Electrical parts list (Main board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	J 753	QNZ0487-001	OPT TRANSMITTER	OPT D.OUT	
	J 754	QNN0434-001	PIN JACK		
	J 755	QNN0470-001	PIN JACK		
	J 756	QNS0089-001	3.5 JACK	COMPULINK	
	J 901	QNC0082-001	AC INLET		
	K 902	QQR1183-001Z	F.BEADS I.M		
	K1101	QQR1183-001Z	F.BEADS I.M		
	K1102	QQR1183-001Z	F.BEADS I.M		
	K1103	QQR1183-001Z	F.BEADS I.M		
	K1104	QQR1183-001Z	F.BEADS I.M		
	K1161	QQR1183-001Z	F.BEADS I.M		
	K1162	QQR1183-001Z	F.BEADS I.M		
	K1163	QQR1183-001Z	F.BEADS I.M		
	L 901	QQR1194-001	INDUCTOR		
	L 951	QQL31AK-101Z	INDUCTOR		
	L 952	QQL26AK-220Z	INDUCTOR		
	L 955	QQL26AK-220Z	INDUCTOR		
	L 957	QQL244K-100Z	INDUCTOR		
	L 959	QQL244K-100Z	INDUCTOR		
	L1101	QQL121M-1R0Y	INDUCTOR I.M		
⚠	PC901	PC123FY	IC(PHOTO COUPLE)		
⚠	PC902	PC123FY	IC(PHOTO COUPLE)		
	Q 951	KTD863/Y/-T	TRANSISTOR		
	Q 952	KRA104M-T	D.TR.I.M		
	Q 953	KTA1267/G/-T	TR I/M		
	Q 991	KTC3199/Y/-T	TR I/M		
	Q1101	2SC3576-JVC-T	TRANSISTOR I/M		
	Q1102	2SC3576-JVC-T	TRANSISTOR I/M		
	R 900	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 901	QRL01DJ-683X	OMF RESISTOR	68K 5% 1/1W	
	R 902	QRZ9044-335	COMP.RESISTOR	3.3M 1/0W	
	R 903	QRE141J-390Y	C RESISTOR	39 5% 1/4W	
	R 904	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 905	QRL027J-683	OMF RESISTOR	68K 5% 1/2W	
	R 906	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R 907	QRT022J-R47	OMF RESISTOR	5% 1/2W	
	R 908	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 910	QRE141J-754Y	C RESISTOR	750K 5% 1/4W	
	R 911	QRE141J-754Y	C RESISTOR	750K 5% 1/4W	
	R 952	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 953	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 955	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 956	QRE141J-120Y	C RESISTOR	12 5% 1/4W	
	R 960	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 961	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R 963	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 965	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 969	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 973	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 974	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 975	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 976	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1101	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R1102	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R1103	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1104	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1105	QRE141J-561Y	C RESISTOR	560 5% 1/4W	
	R1106	QRE141J-561Y	C RESISTOR	560 5% 1/4W	
	R1107	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1108	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1109	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R1110	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R1111	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R1112	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R1113	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1114	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1115	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1116	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1117	QRA14CF-1101Y	MF.RES IM	11 1/4W	
	R1118	QRA14CF-1101Y	MF.RES IM	11 1/4W	
	R1119	QRA14CF-1101Y	MF.RES IM	11 1/4W	
	R1120	QRA14CF-1101Y	MF.RES IM	11 1/4W	
	R1121	QRA14CF-3601Y	M.F.RESISTOR	36 1/4W	
	R1122	QRA14CF-3601Y	M.F.RESISTOR	36 1/4W	
	R1123	QRA14CF-3601Y	M.F.RESISTOR	36 1/4W	
	R1124	QRA14CF-3601Y	M.F.RESISTOR	36 1/4W	
	R1125	QRA14CF-3601Y	M.F.RESISTOR	36 1/4W	
	R1126	QRA14CF-3601Y	M.F.RESISTOR	36 1/4W	
	R1127	QRA14CF-1802Y	M.F.RESISTOR	18 1/4W	
	R1128	QRA14CF-1802Y	M.F.RESISTOR	18 1/4W	
	R1129	QRA14CF-3301Y	MF.RES IM	33 1/4W	
	R1130	QRA14CF-3301Y	MF.RES IM	33 1/4W	
	R1131	QRA14CF-1802Y	M.F.RESISTOR	18 1/4W	
	R1132	QRA14CF-1802Y	M.F.RESISTOR	18 1/4W	
	R1133	QRA14CF-1802Y	M.F.RESISTOR	18 1/4W	
	R1134	QRA14CF-1802Y	M.F.RESISTOR	18 1/4W	
	R1135	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1136	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1137	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1138	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1139	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R1140	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R1141	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R1142	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R1144	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1145	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1146	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1147	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1148	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1149	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1150	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1151	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R1161	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R1162	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1163	QRE141J-270Y	C RESISTOR	27 5% 1/4W	
	R1164	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R1165	QRJ146J-2R2X	UNF C.RES I/M	2.2 5% 1/4W	
	R1181	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1182	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1183	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1184	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1185	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1186	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1187	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R1188	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	SP753	VYH7653-001	IC HOLDER		
⚠	T 901	QQS0114-001	SW TRANSF		
	T1161	QQR1185-001	PULSE TRANS		

■ **Electrical parts list (Operation switch & FL Display board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 806	QER61AM-476Z	E CAPACITOR	47MF 20% 10V	
	C 807	NCB31CK-104X	C CAPACITOR		
	C 810	QER61HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	CN802	QGF1016F3-13	CONNECTOR C.M		
	CN804	QGF0522F1-40W	FFC/FPC CONNECTOR		
	CN805	QGF1016C2-07W	FFC/FPC CONNECTOR		
	CN806	QGF1016F3-07	FFC/FPC CONNECTOR		
	CN812	QGF1016F2-04W	CONNECTOR		
	CN813	QGF1016F2-04W	CONNECTOR		
	CN814	QGF1016F3-11	CONNECTOR		
	D 805	SLR-342DC-T	LED I.M		
	D 806	SLR-342DC-T	LED I.M		
	D 807	SLR-342DC-T	LED I.M		
	D 808	SLR-342DC-T	LED I.M		
	D 809	SLR-342DC-T	LED I.M		
	D 810	SLR-342DC-T	LED I.M		
	D 811	SLR-342DC-T	LED I.M		
	D 812	SPR-325MVW/L/-T	LED		
	D 814	SPR-325MVW/L/-T	LED		
	D 815	SLR-342MC-T	LED		
	D 816	SLR-342DC-T	LED I.M		
	D 817	SLR-342DC-T	LED I.M		
	D 818	SLR-342DC-T	LED I.M		
	D 819	SLR-342DC-T	LED I.M		
	D 820	SLR-342DC-T	LED I.M		
	D 821	SLR-342DC-T	LED I.M		
	D 822	SLR-342DC-T	LED I.M		
	D 823	SLR-342MC-T	LED		
	DI801	QLF0085-002	FL TUBE	FUTABA	
	IC804	PIC-37043TH2	PHOTO DET.		
	R 805	NRSA63J-222X	MG RESISTOR		
	R 806	NRSA63J-431X	MG RESISTOR		
	R 807	NRSA63J-431X	MG RESISTOR		
	R 808	NRSA63J-561X	MG RESISTOR		
	R 809	NRSA63J-751X	MG.RES C.M		
	R 810	NRSA63J-132X	MG RESISTOR		
	R 811	NRSA63J-222X	MG RESISTOR		
	R 812	NRSA63J-512X	MG RESISTOR		
	R 813	NRSA63J-222X	MG RESISTOR		
	R 814	NRSA63J-431X	MG RESISTOR		
	R 815	NRSA63J-431X	MG RESISTOR		
	R 816	NRSA63J-561X	MG RESISTOR		
	R 817	NRSA63J-751X	MG.RES C.M		
	R 818	NRSA63J-132X	MG RESISTOR		
	R 819	NRSA63J-222X	MG RESISTOR		
	R 822	NRSA63J-181X	MG RESISTOR		
	R 824	NRSA63J-181X	MG RESISTOR		
	R 825	NRSA63J-181X	MG RESISTOR		
	R 826	NRSA63J-181X	MG RESISTOR		
	R 827	NRSA63J-181X	MG RESISTOR		
	R 828	NRSA63J-181X	MG RESISTOR		
	R 829	NRSA63J-181X	MG RESISTOR		
	R 830	NRSA63J-181X	MG RESISTOR		
	R 838	NRSA63J-101X	MG RESISTOR		
	R 839	NRSA63J-181X	MG RESISTOR		
	R 845	NRSA63J-181X	MG RESISTOR		
	R 859	NRSA63J-104X	MG RESISTOR		
	R 860	NRSA63J-181X	MG RESISTOR		
	R 861	NRSA63J-181X	MG RESISTOR		
	R 862	NRSA63J-181X	MG RESISTOR		
	R 863	NRSA63J-181X	MG RESISTOR		
	R 864	NRSA63J-181X	MG RESISTOR		
	R 865	NRSA63J-181X	MG RESISTOR		
	R 866	NRSA63J-181X	MG RESISTOR		
	R 867	NRSA63J-181X	MG RESISTOR		
	R 868	NRSA63J-104X	MG RESISTOR		
	R 869	NRSA63J-104X	MG RESISTOR		
	R 870	NRSA63J-104X	MG RESISTOR		
	R 871	NRSA63J-104X	MG RESISTOR		
	R 872	NRSA63J-104X	MG RESISTOR		
	R 873	NRSA63J-104X	MG RESISTOR		
	R 874	NRSA63J-104X	MG RESISTOR		
	R 875	NRSA63J-104X	MG RESISTOR		
	R 876	NRSA63J-104X	MG RESISTOR		
	R 877	NRSA63J-104X	MG RESISTOR		
	R 878	NRSA63J-104X	MG RESISTOR		
	R 879	NRSA63J-104X	MG RESISTOR		
	R 880	NRSA63J-104X	MG RESISTOR		
	R 881	NRSA63J-104X	MG RESISTOR		
	R 882	NRSA63J-104X	MG RESISTOR		
	R 883	NRSA63J-104X	MG RESISTOR		
	R 884	NRSA63J-104X	MG RESISTOR		
	R 885	NRSA63J-104X	MG RESISTOR		
	R 886	NRSA63J-104X	MG RESISTOR		
	R 887	NRSA63J-104X	MG RESISTOR		
	R 888	NRSA63J-104X	MG RESISTOR		
	R1852	NRSA63J-104X	MG RESISTOR		
	R1853	NRSA63J-104X	MG RESISTOR		
	R1854	NRSA63J-104X	MG RESISTOR		
	R1855	NRSA63J-104X	MG RESISTOR		
	R1856	NRSA63J-104X	MG RESISTOR		
	R1857	NRSA63J-104X	MG RESISTOR		
	R1858	NRSA63J-104X	MG RESISTOR		
	R1860	NRSA63J-104X	MG RESISTOR		
	R1861	NRSA63J-104X	MG RESISTOR		
	R1862	NRSA63J-104X	MG RESISTOR		
	R1863	NRSA63J-104X	MG RESISTOR		
	R1864	NRSA63J-104X	MG RESISTOR		
	R1865	NRSA63J-104X	MG RESISTOR		
	R1866	NRSA63J-104X	MG RESISTOR		
	R1867	NRSA63J-104X	MG RESISTOR		
	S 801	QSW0651-001Z	TACT SWITCH		
	S 802	QSW0651-001Z	TACT SWITCH		
	S 803	QSW0651-001Z	TACT SWITCH		
	S 804	QSW0651-001Z	TACT SWITCH		
	S 805	QSW0651-001Z	TACT SWITCH		
	S 806	QSW0651-001Z	TACT SWITCH		
	S 807	QSW0651-001Z	TACT SWITCH		
	S 808	QSW0651-001Z	TACT SWITCH		
	S 809	QSW0651-001Z	TACT SWITCH		
	S 810	QSW0651-001Z	TACT SWITCH		
	S 811	QSW0651-001Z	TACT SWITCH		
	S 812	QSW0651-001Z	TACT SWITCH		
	S 813	QSW0651-001Z	TACT SWITCH		
	S 814	QSW0651-001Z	TACT SWITCH		
	S 815	QSW0651-001Z	TACT SWITCH		

■ **Electrical parts list (Motor & detection switch board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 81	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C 82	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C 83	QDVB1EZ-223Y	C CAPACITOR		
	CN 81	QGF1016F3-09	FFC/FPC CONNECTOR		
	CN 82	QGF1016F3-04	CONNECTOR		
	CN 84	QJK018-064601	SOCKET WIRE 1		
	CN 85	QJK018-031703	SOCKET WIRE 2		
	IC 81	GP2S28J	PHOTO SENSOR		
	IC 82	GP2S28	PHOTO SENSOR		
	Q 81	2SC1740S/RS/-T	TRANSISTOR		
	Q 82	2SC1740S/RS/-T	TRANSISTOR		
	R 81	QRE141J-271Y	C RESISTOR	270 5% 1/4W	
	R 82	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 83	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 84	QRE141J-822Y	C RESISTOR	8.2K 5% 1/4W	
	R 85	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 86	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	S 81	QSW0472-001	SWITCH		
	S 82	QSW0472-001	SWITCH		
	S 83	QSW0472-001	SWITCH		

■ **Electrical parts list (Cam switch board)** **Block No. 05**

⚠	Item	Parts number	Parts name	Remarks	Area
	CN083	QGF1016F3-04	CONNECTOR		
	S 084	QSW0932-001	CAM SWITCH		

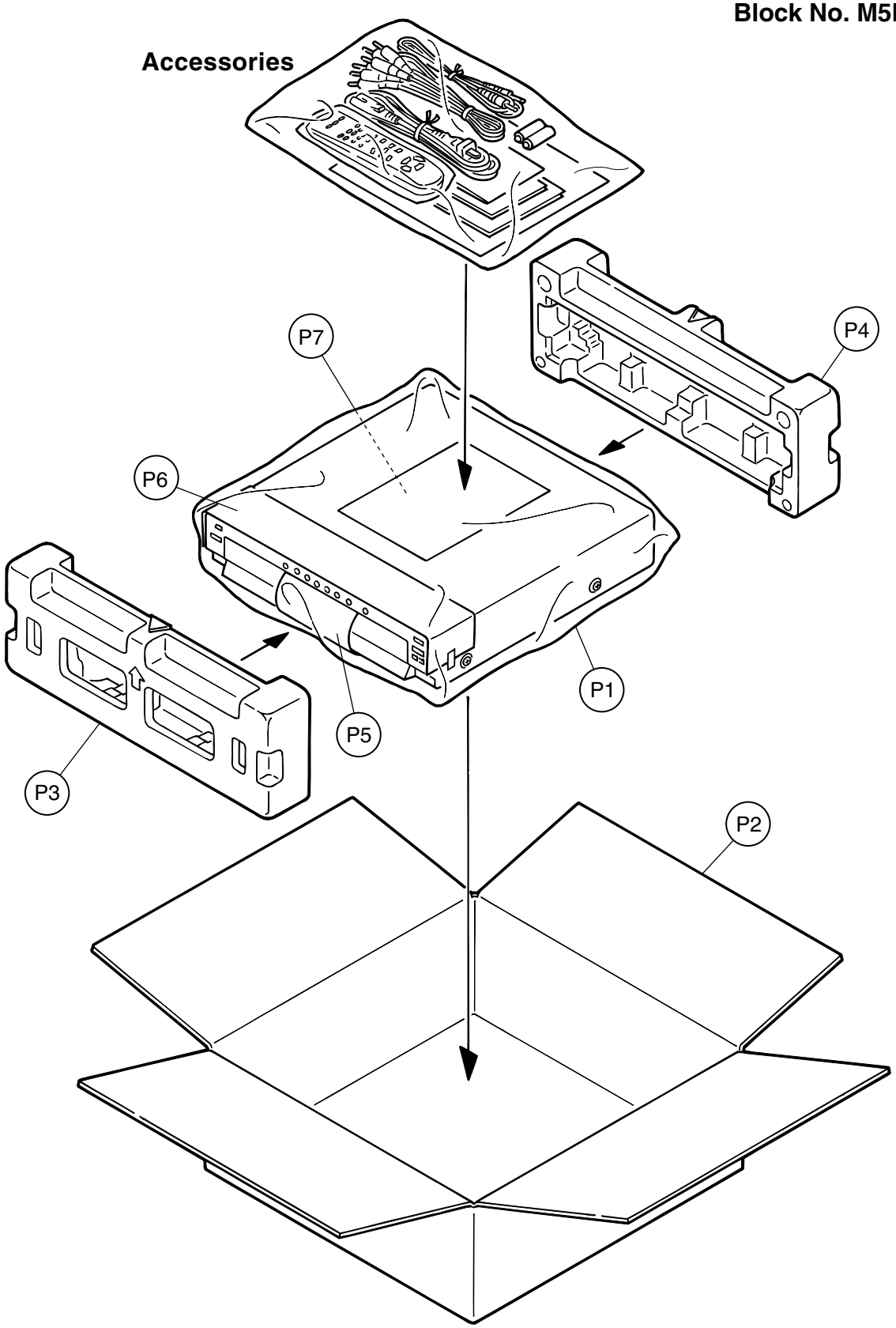
■ **Electrical parts list (Frontend & Motor driver board)** **Block No. 06**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 101	NCB31CK-104X	C CAPACITOR		
	C 105	NEA70JM-476X	E.CAPACITOR		
	C 106	NEA70JM-476X	E.CAPACITOR		
	C 107	NCB31CK-104X	C CAPACITOR		
	C 119	NCS31HJ-221X	C.CAPA. C.M		
	C 120	NCS31HJ-820X	C CAPACITOR		
	C 121	NCS31HJ-220X	C CAPACITOR		
	C 122	NCB31HK-271X	C CAPACITOR		
	C 123	NCB31CK-104X	C CAPACITOR		
	C 124	NCB31CK-104X	C CAPACITOR		
	C 125	NCB31CK-104X	C CAPACITOR		
	C 126	NBSG0JM-157X	E CAPACITOR		
	C 127	NCB31HK-102X	C CAPACITOR		
	C 128	NCB31CK-104X	C CAPACITOR		
	C 130	NCB31CK-104X	C CAPACITOR		
	C 131	NCS31HJ-120X	C.CAPA. C.M		
	C 132	NCB31CK-104X	C CAPACITOR		
	C 133	NCB31HK-561X	C CAPACITOR		
	C 134	NCB31HK-561X	C CAPACITOR		
	C 135	NCB31CK-273X	C CAPACITOR		
	C 136	NCB31CK-473X	C CAPACITOR		
	C 138	NCB31CK-104X	C CAPACITOR		
	C 139	NCB31CK-104X	C CAPACITOR		
	C 140	NBTL0JM-226X	E.CAPA.C.M		
	C 141	NCB31CK-104X	C CAPACITOR		
	C 143	NCB31CK-104X	C CAPACITOR		
	C 144	NCB31CK-104X	C CAPACITOR		
	C 145	NCB31CK-103X	C CAPACITOR		
	C 151	NEA70JM-226X	E CAPACITOR		
	C 152	NEX50JM-156X	E.CAPA.C.M		
	C 159	NCB31CK-104X	C CAPACITOR		
	C 160	NCB31CK-104X	C CAPACITOR		
	C 161	NEA70GM-336X	E CAPACITOR		
	C 170	NEA70JM-336X	E CAPACITOR		
	C 171	NEX50JM-336X	E CAPACITOR		
	C 251	NCB31CK-104X	C CAPACITOR		
	C 252	NEA71CM-226X	E.CAPAP. C.M		
	C 253	NCB31CK-104X	C CAPACITOR		
	C 254	NEA70JM-226X	E CAPACITOR		
	C 255	NCB31HK-223X	C CAPACITOR		
	C 256	NCB31CK-104X	C CAPACITOR		
	C 257	NCB31CK-103X	C CAPACITOR		
	C 258	NCB31CK-103X	C CAPACITOR		
	C 259	NCB31CK-103X	C CAPACITOR		
	C 260	NCB31CK-104X	C CAPACITOR		
	C 261	NCB31CK-104X	C CAPACITOR		
	C 262	NCB31CK-104X	C CAPACITOR		
	C 263	NCB31CK-104X	C CAPACITOR		
	C 264	NCB31CK-103X	C CAPACITOR		
	C 271	NEA70JM-226X	E CAPACITOR		
	C 273	NCB31CK-104X	C CAPACITOR		
	C 274	NCB31CK-104X	C CAPACITOR		
	C 275	NCB31HK-271X	C CAPACITOR		
	C 277	NCB31HK-102X	C CAPACITOR		
	C 278	NCB31HK-272X	C CAPACITOR		
	C 280	NEA71CM-476X	E CAPACITOR		
	C 281	NCB31HK-223X	C CAPACITOR		
	C 282	NCB31CK-103X	C CAPACITOR		
	C 287	NCB31CK-104X	C CAPACITOR		
	CN101	QGF1012F1-30X	FPC CONNECTOR	PU	
	CN110	QGF0522F1-40W	FFC/FPC CONNECTOR	ADSC/MCOM	
	CN201	QGF1016F2-11W	CONNECTOR C.M	SPM	
	IC101	AN8702FH	IC		
	IC102	MM3023DN-X	IC		
	IC251	BA6664FM-X	LSI		
	IC271	BA5983FM-X	IC		

⚠	Item	Parts number	Parts name	Remarks	Area
	K 101	NQR0007-002X	FERRITE BEADS		
	K 102	NQR0007-002X	FERRITE BEADS		
	K 103	NQR0007-002X	FERRITE BEADS		
	K 104	NQR0007-002X	FERRITE BEADS		
	K 105	NQR0007-002X	FERRITE BEADS		
	K 106	NQR0007-002X	FERRITE BEADS		
	K 107	NQR0007-002X	FERRITE BEADS		
	K 108	NQR0007-002X	FERRITE BEADS		
	L 101	NQL044K-100X	INDUCTOR		
	Q 101	KTA1001/Y/-X	TRANSISTOR		
	Q 102	KTA1001/Y/-X	TRANSISTOR		
	R 101	NRSA63J-103X	MG RESISTOR		
	R 102	NRSA63J-333X	MG RESISTOR		
	R 103	NRSA63J-333X	MG RESISTOR		
	R 104	NRS125J-270X	MG RESISTOR		
	R 105	NRS125J-270X	MG RESISTOR		
	R 106	NRSA63J-2R2X	MG RESISTOR		
	R 107	NRSA63J-2R2X	MG RESISTOR		
	R 109	NRSA63J-910X	MG RESISTOR		
	R 110	NRSA63J-273X	MG RESISTOR		
	R 111	NRSA63J-391X	MG RESISTOR		
	R 112	NRSA63J-273X	MG RESISTOR		
	R 115	NRVA63D-243X	RES. C.M		
	R 116	NRSA63J-393X	MG RESISTOR		
	R 117	NRSA63J-123X	MG RESISTOR		
	R 118	NRSA63J-223X	MG RESISTOR		
	R 127	NRSA63J-222X	MG RESISTOR		
	R 128	NRSA63J-105X	MG RESISTOR		
	R 129	NRSA63J-105X	MG RESISTOR		
	R 131	NRSA63J-822X	MG RESISTOR		
	R 132	NRSA63J-103X	MG RESISTOR		
	R 152	NRS125J-1R0X	MG RESISTOR		
	R 153	NRS125J-4R7X	MG RESISTOR		
	R 155	NRSA63J-182X	MG RESISTOR		
	R 251	NRS125J-R47X	MG RESISTOR		
	R 252	NRSA63J-2R2X	MG RESISTOR		
	R 253	NRSA63J-0R0X	MG RESISTOR		
	R 254	NRSA63J-203X	MG RESISTOR		
	R 256	NRSA63J-470X	MG RESISTOR		
	R 257	NRS125J-1R0X	MG RESISTOR		
	R 258	NRSA63J-0R0X	MG RESISTOR		
	R 259	NRSA63J-103X	MG RESISTOR		
	R 271	NRSA63J-470X	MG RESISTOR		
	R 272	NRS125J-1R0X	MG RESISTOR		
	R 274	NRSA63J-103X	MG RESISTOR		
	R 275	NRSA63J-103X	MG RESISTOR		
	R 276	NRSA63J-123X	MG RESISTOR		
	R 277	NRSA63J-123X	MG RESISTOR		
	R 283	NRSA63J-103X	MG RESISTOR		
	R 284	NRSA63J-103X	MG RESISTOR		
	R 288	NRSA63J-0R0X	MG RESISTOR		
	R 289	NRSA63J-752X	MG RESISTOR		
	R 290	NRSA63J-752X	MG RESISTOR		
	R 291	NRSA63J-682X	MG RESISTOR		
	S 101	QSW0620-001	SWITCH	REST SW	

Packing materials and accessories parts list

Block No. M4MM
Block No. M5MM



■ Packing list

Block No. M4MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	QPC06006515P	POLY BAG	1		
	P 2	LE30965-014A	PACKING CASE	1		80C,80J
		LE30965-015A	PACKING CASE	1		85J
	P 3	LE20603-001A	PACKING PAD(F)	1		
	P 4	LE20604-001A	PACKING PAD(R)	1		
	P 5	E36997-303	PROTECT SHEET	1		
	P 6	E36997-173	PROTECT SHEET	1		
	P 7	LV42740-001A	CAUTION SHEET	1		

■ Accessories list

Block No. M5MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	LET0189-002B	INST BOOK	1		80C
		LET0189-001B	INST BOOK	1		80J,85J
⚠	A 2	QMPE200-183-JC	POWER CORD	1		
	A 3	BT-51028-1	J=REGIST CARD	1		
	A 4	YU20333	SAFETY INST.	1		
	A 5	BT-51015-4	J=SVC CENTER LIST	1		80J,85J
	A 6	QAM0375-001	COMP.CORD 3P	1		
	A 7	QAM0223-001	PLUG CORD	1		
	A 8	QAM0328-001	AV CORD 3P	1		
	A 9	RM-SXVF80J	REMOCON UNIT	1		80C,80J
		RM-SXVF85J	REMOCON UNIT	1		85J
	A 10	---------	BATTERY	2		
	A 11	QPC02504015P	POLY BAG	1		
	A 12	BT-52004-2	WARRANTY CARD	1		80C

Explanation of area column

80J =XV-F80BK ver.J
80C =XV-F80BK ver.C
85J =XV-F85GD ver.J